Shri Vile Parle Kelavani Mandal's
Institute of Technology, Dhule
Survey No. 499, Plot No. 02, Behind Gurudwara, Mumbai - Agra Road,
Dist. Dhule, Maharashtra, 424001 Phone No.: (02562) 297801, 297601
Web :- svkm-iot.ac.in Mail:- iotdhule@svkm.ac.in
Approved By AICTE, DTE & Affiliated to DBATU, Lonere

7.2 Best Practices

Practice: 01

Title of the Practice:

"Project Based Learning" (PBL)

Objectives of the Practice: (100 Words)

The institute advocates outcome-based education by implementing "Project Based Leaning" which is substantial in engineering education. This practice hones comprehension and fortifies the knowledge of the learners and thus it foregrounds the application and orientation of Project Based Leaning towards society for its betterment. Students demonstrate real-time application and utility of their ideas through Project Based Leaning. The objectives of Project Based Leaning are listed below:

- To design a solution to the complex problem.
- To demonstrate their ideas in innovative and useful way.
- To imbibe the skills of report writing.
- To foster the spirit of teamwork.
- To nurture the environment of cooperation and coordination.
- To hone interpersonal skills.

Context of the practice: (150 Words)

(Describe in detail about were the contextual features or challenging issues that needed to be addressed for the implemented best practice)

The institute always thrusts upon the "Project Based Leaning" to inculcate the approach of real-life application of theoretical learning of its students. This is a learner-centric approach where every student undertakes projects under the guidance of mentor-faculty from higher Semester and discusses outcomes of their project at Project Exhibitions that are held at various levels. They often deliver project Seminars about their progress intermittently as instructed by

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SVKM's Institute of Technology,Dhule

Shri Vile Parle Kelavani Mandal's DHULE Institute of Technology

their respective mentor-faculty. Project Based Leaning is always touted as experiential learning that strives to achieve the Higher Order of Thinking Skills (HOTS) specified in Blooms Taxonomy. It promulgates creativity, innovative and out-of-box thinking. Furthermore, it fosters the approach of entrepreneurship as the students work in groups; they inculcate the traits viz team building, teamwork, coordinating variegated activities to co-operate, as well as they learn about resource-organization and planning, team-management and leadership. Thus, they hone their cognitive, social and psychomotor abilities along with administrative and managerial skills.

The Practice (400 Words)

(Describe the practice and its uniqueness in the context of India higher education. What were the constraints / limitations, if any, faced (in about 400 words)

The institute plans and implements Project Based Leaning through the planning, organization of and participation in different competitions along with conduction of various events. They include viz National, Science Day (NSD), Smart India Hackethon (SIH), Avishkar (University Level Project Competition), District Level Competitions, KPIT Sparkle, Unnat Bharat Abhiyan (UBA), Dipex etc. Project Based Learning is executed through such kind of competitions and events with the problem statements and topics to find pragmatic solutions to assist society at large. Students are given enough freedom to choose the topic of their choice for Project Based Leaning; often, they choose topic beyond their discipline and their academics. Further, they are provided with every needed assistant to carry out their projects fruitfully.

The primary execution of Project Based Leaning starts with the exhibition of project related crude-ideas at First Year Level in celebration of National Science Day every year and thereafter the best ideas with their project are further pushed up for participation in Avishkar and such other relevant competitions where students get an opportunity to showcase their talent and skills. These ideas and projects are evaluated at every level to assess their validity and if found worthy to deserve their place, after rigorous critical evaluation by institute evaluation team which involves experienced and senior faculties. Hereafter, the best ideas and projects are

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segregated based on the field of application, utility and scope. The mentors are assigned to respective groups to groom these ideas and project who assists them to take their ideas and projects at advance level. These projects under the guidance of mentors are promoted further to participate at higher-level competitions mentioned above to prove their innovativeness and usability. Because of this rigorous execution of Project Based Leaning, a few of projects are awarded with different prizes and even a few of them are patented. The flow-chart of the general process of planning and execution of Project Based Learning is generically shown as given below:

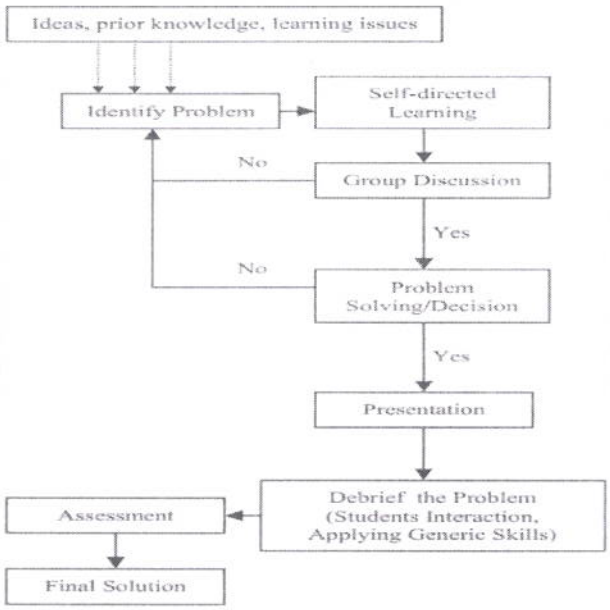

Fig. Flow Chart of PBL

Thus, the institute undoubtedly promotes Project Based Leaning advocating intervention of technology in all its departments. It provides substantial access to institutional resources viz use of laboratory after college hours, free trainings like Campus Credential to enhance technical competency in programming languages. Moreover, the advanced level of training is generally overlooked by the students. Often, they face difficulties in achieving their set goal of project as they need to cull technical data from industries; they require components within due time at their location which never comes to them at the right time.

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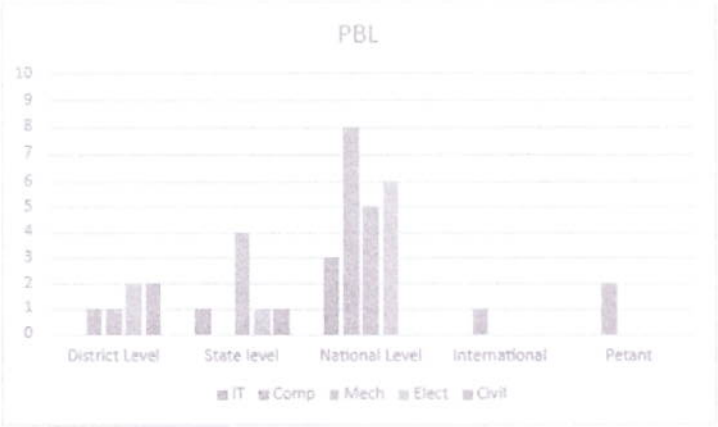
Approved By AICTE, DTE & Affiliated to DBATU, Lonere

Evidence of Success:

(Attached photos and excel sheet that contain data about event and graph of activities)



Problems Encountered and Resources Required (150 Words)

(Please identify the problems encountered and resources required to implement the practice (in about 150 words)

Project-based Learning incessantly implemented in all departments however lack of motivation in students results in expelling themselves from the practice at certain stages. There are major areas where problems encountered which are listed below:

1. Cost
2. Location
3. Varying requirements for various projects

It is noticed that during implementation of Project Based Leaning, the resources, skills and finance for the better execution of these projects were limited due to the constraints of Syllabus and time. Learners' reluctance, flexibility and openness to inculcate new skills, programming languages and software to upskill themselves seemed to be a conspicuous challenge. Learners' let go attitude and lack of motivation were also noticed as obstacles in effective planning and implementation of Project Based Leaning. Additionally, different projects need different materials and facilities that need to be computed well in advance but the shortage of finance looms out.

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Ref: NOTICE/IQAC/2020/ 21 3/12/2021

NOTICE

This is to inform all IQAC members that, a periodic IQAC meeting is scheduled on 17th June 2021.

Venue: Board Room near Principal cabin

Time: 03:00 pm onwards

Agendas: To discuss the objective of Best practices in the institute.

- To discuss project-based best practices in the institute.
- Stakeholders Contribution for the Placement of Students

All are requested to attend the same.

Dr. Bhushan Chaudhari
IQAC Coordinator

Shri Vile Parle Kelavani Mandal's Institute of Technology DHULE

Dr. Nilesh Salunke
Principal
Principal
SVKM's Institute of Technology,Dhule

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Ref: MOM/IQAC/2020 / 21 7/12/2020

Minutes of the 3rd Meeting of Internal Quality Assurance Cell (IQAC) held on 7th Dec.2020 at 3:00 p.m. in the Board Room near the Principal cabin.

Agendas:

- To discuss the best practices in the institute.

The following members attended the meeting:

1.	Dr. Nilesh Salunke	-	Principal
2.	Dr. Bhushan Chaudhari	-	IQAC Coordinator
3.	Dr. Vishal Moyal	-	IQAC Member
4.	Dr. Vishal Moyal	-	IQAC Member
5.	Dr. Shrikant Randhavane	-	IQAC Member
6.	Mr. Mohemmed Junaiddudin	-	IQAC Member

The following members were on leave of absence -

1. Dr. Tushar Shinde, IQAC Member

At the outset, Dr. Nilesh Salunke, Hon'ble Principal, welcomed the committee and chaired the meeting. Dr. Bhushan Chaudhari, IQAC Coordinator congratulated the committee members.

Dr. Nilesh Salunke stressed on the following points –

- The institute promotes outcome-based education by implementing "Project Based Learning," a significant component of engineering education.
- Through Project Based Learning, students demonstrate the real-time application and applicability of their ideas.
- The institute will use the creative strategy to incorporate all of its stakeholders in order to boost the student placement ratio.

The meeting ended with a question-answer session and a vote of thanks to the Chair.

Shri Vile Parle Kelavani Mandal's Institute of Technology DHULE

Sd/-

Dr. Nilesh Salunke
Principal
Principal
SVKM's Institute of Technology,Dhule

IQAC

Action Taken Report

IQAC Meeting held on 7th March 2020

The action taken by the Internal Quality Assurance Cell (IQAC) as suggested by the IQAC team and administrator (Secretory, Principal, and HODs) and the suggestion was implemented and appropriate action was taken as a recommended meeting held on 7th March 2020

Sr. No.	Agenda Item	Action Taken
1	To approve the minutes of the 21th IQAC meeting held on 7th March 2020	Approved.
		As per discussion in the meeting institute has implemented Project Learning through the planning, organization, and participation in different competitions along with the conduction of various events. They include viz National, Science Day (NSD), Smart India Hackathon (SIH), Avishkar (University Level Project Competition), District Level Competitions, KPIT Sparkle, Unnat Bharat Abhiyan (UBA), Dipex etc.
		The institute has adopted this practice to ensure the highest placement of its students. It is transpired that to fortify the institute-industry tie-up, its stakeholders' association can extensively be used.
		Placement cells have a function to illuminate the job situation to uncover the right place where students fit in
		https://svkmmumbai-my.sharepoint.com/:x:/g/personal/tushar_sh_svkm_ac_in/EagS_f-6ArZMoe8qfIwi4VABVlZy8cpSxVaZPr4KExtaqg?e=4%3A9Jd2yy&fromShare=true&at=9&CID=f0094eb2-023f-7b8f-9dfd-de9cbce1b739
		The flow-chart of the general process of planning and execution of Project Based Learning is generically shown as given below.
		Attached are photos and an Excel sheet that contains data about the event and a graph of activities.

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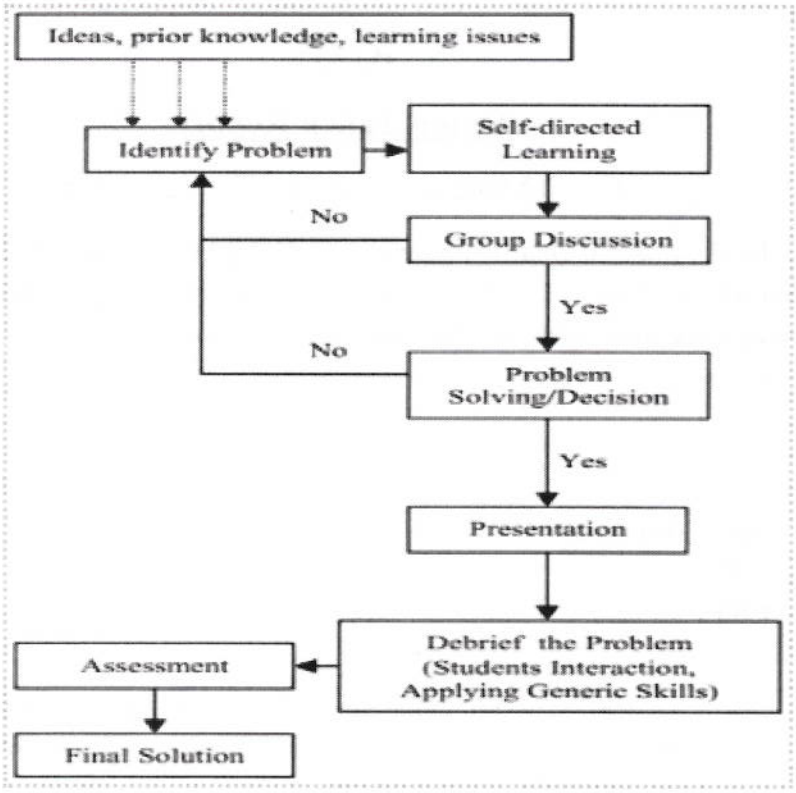

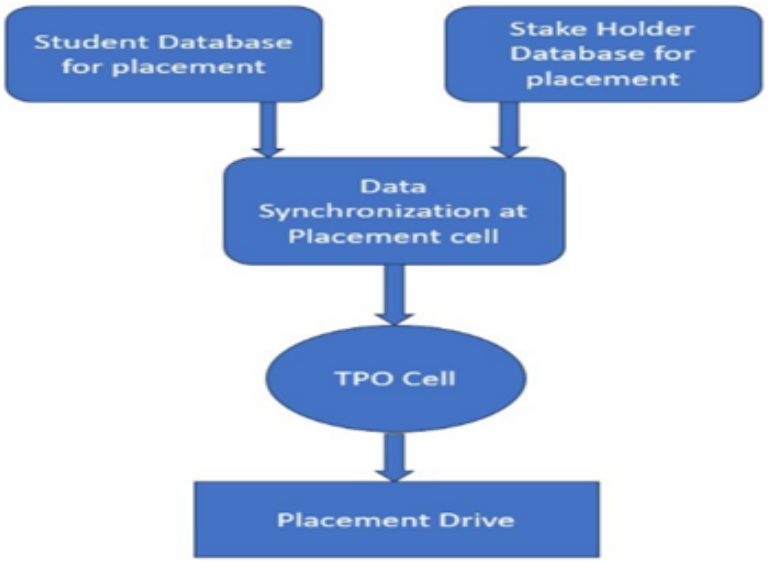

Dr. Bhushan Chaudhari
IQAC Coordinator

Shri Vile Parle Kelavani Mandal's Institute of Technology DHULE

Dr. Nilesh Salunke
Principal

Principal
SVKM's Institute of Technology,Dhule

Department of Applied Sciences and Humanities

Project Based Learning

Case Study

Objective:

1) To increase the participation of students to demonstrate their cognitive abilities in an innovative way.

2) To provide an intellectual platform to nurture and actualize their ideas, knowledge and skills in creative ways.

3) To nourish team-spirit, team-building, co-ordination. Co-operation, leadership.

4) To foster Higher Order Thinking Skills (HOTS).

Methodology Used:

1) They are informed about the significance of PBL.

2) Assigned Faculty Mentors.

3) Participants are inspired through Brain-storming process.

4) Participants are engaged in finding real issues and then motivated to find out pragmatic solutions.

5) Periodically reviewed by the Mentors.

6) Promoted to participate in various competitions.

Context:

PBL is the most effective method of enhancing cognitive abilities of learners. It provides scope to actualize their thoughts through demonstration of their abstract ideas through Model and Poster Completion held at Institute Level at National Science Day every year. The students are inspired to participate from every division/ branch and maximum participation is ensured by Class Mentor. Every needed assistance is provided to all the students with the intentions that they foster their ideas in excellent way. They are informed well in advance so that they can prepare well. Even the prizes are given to attract students and to hold their attention.

Execution:

Students are encouraged to participate in different completion during celebration of National Science Day. Their participation can be at individual level or at group level. They are further

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assigned mentors to groom their ideas. The evaluation team if finds their ideas innovative; they are further motivated to participate at University Level competition 'Avishkar'. The mentor faculty is also assigned to students from higher semester to take their ideas at further level to through proper grooming.

Project Title/Participation Event:

"Artificial Intelligence Human detection"

Faculty Mentor:

Prof. Ashish Awate

Students Involved:

1. Jayesh Manohar Chaudhari
2. Tejas Sunil Chaudhari
3. Abhijit Chhotu Patil
4. Rushikesh Dipaksingh Girase

Start Year-End Year: 2019-20

Work in Level 1:

INDRA:

- Started on January 2022.
- Focuses on human detection and human counting and activity recognition using artificial intelligence via image, video, and camera.
- Generates results and sends insights on WhatsApp automatically.
- Technologies: Machine learning, OpenCV, Python.

Work in Level 2:

VAYU:

- Started on March 2022.
- Focuses on the extraction of facial features and characteristics of the human face in real-time.
- Generates results and sends insights on WhatsApp automatically.
- Technologies: OpenCV, artificial intelligence, Python, Kaggle Dataset.

Work in Level 3:

DARSH:

- Started on August 2022.
- Focuses on vehicle detection, vehicle counting, and number plate extraction.
- Generates analysed and precise results.
- Technologies: Artificial intelligence, OpenCV, Python.

Certificate:

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SANT GADGE BABA AMRAVATI UNIVERSITY
AMRAVATI (M. S.)

SGBAU Research and Incubation Foundation Centre and Director Innovation, Incubation & Linkages
in Association with
P.G. Department of Computer Science and Engineering
Organizes
Annual National Project Competition, Startup and Business Plan Competition
SGBAU Startup Fest - 2022
On
Innovations, Startup Ecosystem & Business Plan During 5-6, May 2022

CERTIFICATE OF PARTICIPATION

This is to certify that Mr. / ~~Ms.~~ Tejas sunil chaudhari
of svkm's iot, dhule, maharashtra *has participated in " Innovations, Startup Ecosystem & Business Plan" in Category - Computer Science & Engineering and Information Technology / Electronics (Science and Technology). Electrical Instrumentation Engineering/ Civil Engineering, Mechanical Engineering & Allied Disciplines / Textile, Chemical, Biomedical, Biotechnology, Agricultural & All other Sciences & Engineering Disciplines. Under the Group - Diploma & Science Graduates / Engg. Graduates & Above / Startup level & Industrial and has awarded the prize* 1st.

Dr. Dileep Malkhede
Vice-Chancellor
Sant Gadge Baba Amravati University

Dr. S. S. Sherekar
Director(I/c)
Innovation, Incubation and Linkages

Dr. V. M. Thakare
HoD
Computer Science and Engineering

Shri Vile Parle Kelavani Mandal's Institute of Technology DHULE

Shinde

Dr. Tushar shinde

SANT GADGE BABA AMRAVATI UNIVERSITY
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SGBAU Research and Incubation Foundation Centre and Director Innovation, Incubation & Linkages
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SGBAU Startup Fest - 2022
On
Innovations, Startup Ecosystem & Business Plan During 5-6, May 2022

CERTIFICATE OF PARTICIPATION

This is to certify that Mr. / Ms. Jayesh Manohar Chaudhari *of* SVKM's IoT, Dhule, Maharashtra *has participated in " Innovations, Startup Ecosystem & Business Plan" in Category - Computer Science & Engineering and Information Technology / Electronics (Science and Technology), Electrical Instrumentation Engineering/ Civil Engineering, Mechanical Engineering & Allied Disciplines / Textile, Chemical, Biomedical, Biotechnology, Agricultural & All other Sciences & Engineering Disciplines. Under the Group - Diploma & Science Graduates / Engg. Graduates & Above / Startup level & Industrial and has awarded the prize* I st .

Dr. Dileep Malkhede
Vice-Chancellor
Sant Gadge Baba Amravati University

Dr. S. S. Sherekar
Director(I/c)
Innovation, Incubation and Linkages

Dr. V. M. Thakare
HoD
Computer Science and Engineering

स्वातंत्र्याचा अमृत महोत्सव

DISTRICT LEVEL
PROJECT COMPETITION

CERTIFICATE

This Certificate is presented to

Chaudhari Tejas Sunil

From SVKM's Institute of Technology, Dhule

for ~~Winner/Runner-up/Second Runner-up/Participation~~
in " District Level Project Competition "
In Association with DTE, Regional Office Nashik & Shikshan Maharshi Dadasaheb Rawal, Government Polytechnic, Dhule On 11th March 2022.
Organized by Shri Vile Parle Kelavani Mandal's Institute of Technology, Dhule.

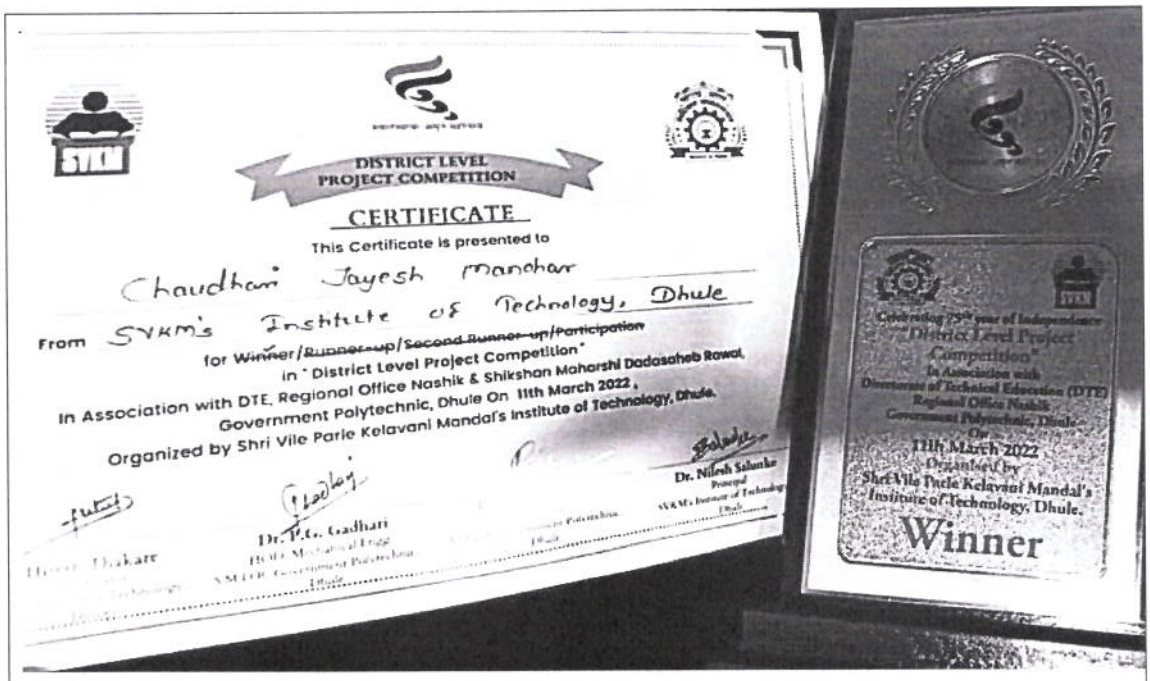
Dr. Hitesh Thakare
Coordinator
SVKM's Institute of Technology, Dhule

Dr. P.G. Gadhari
HOD, Mechanical Engg.
S.M.D.R. Government Polytechnic, Dhule

Dr. R.G. Wadekar
Principal
S.M.D.R. Government Polytechnic, Dhule

Dr. Nilesh Salunke
Principal
SVKM's Institute of Technology, Dhule

Shri Vile Parle Kelavani Mandal's Institute of Technology DHULE



DISTRICT LEVEL
PROJECT COMPETITION

CERTIFICATE

This Certificate is presented to

Chaudhari Jayesh Manohar

From SVKM's Institute of Technology, Dhule

for ~~Winner~~/~~Runner-up~~/~~Second Runner-up~~/~~Participation~~

in "District Level Project Competition"

In Association with DTE, Regional Office Nashik & Shikshan Maharshi Dadasaheb Rawal, Government Polytechnic, Dhule On 11th March 2022,

Organized by Shri Vile Parle Kelavani Mandal's Institute of Technology, Dhule.

Dr. P.G. Gadhari
HOD Mechanical Engg
S.M.E.F.R. Government Polytechnic
Dhule

Dr. Nilesh Salunke
Principal
SVKM's Institute of Technology
Dhule

Celebrating 75th year of Independence
"District Level Project Competition"
In Association with
Directorate of Technical Education (DTE)
Regional Office Nashik
Government Polytechnic, Dhule
On
11th March 2022
Organised by
Shri Vile Parle Kelavani Mandal's
Institute of Technology, Dhule.
Winner

SVKM

SHRI VILE PARLE KELAVANI MANDAL'S
INSTITUTE OF TECHNOLOGY
DHULE

Certificate

This is to certify that

Jayesh

rst / Second / ... icipant position in Project / Model

petition conducte... VKM's Institute of Technology, Dhule.

in Academic Year 2021 - 2022

We Congratulate him / her for this achievement.

Dr. Tusha... inde
Co-ord...

Dr. Nilesh Salunke
Principal

Dhinde

Shri Vile Parle Kelavani Mandal's
DHULE
Institute of Technology

SHRI VILE PARLE KELAVANI MANDAL'S

INSTITUTE OF TECHNOLOGY

DHULE

Certificate

This is to certify that

Mr / ~~Miss~~ Tejas Chaudhari

had secured ~~First~~ / Second / ~~Third~~ / Participant position in Project / Model

competition conducted at SVKM's Institute of Technology,Dhule.

in Academic Year 2021 - 2022

We Congratulate him / ~~her~~ for this achievement.

Dr. Tushar Shinde
FE Co-ordinator

Dr. Nilesh Salunke
Principal

Outcome: (Participation/Project/Paper/Patent)

Level 1: This team received Second Prize in National Science Day-2022 organized by Department of Applied Sciences at SVKM Institute of Technology, Dhule

Level 2: Won first prize in district level project competition Organized by Sri Vile Parle Kelavani Mandal's Institute of Technology in association with DTE, regional office Nashik, and Shikshan Maharshi Dadasaheb Rawal Government Polytechnic Technique Dhule on 11th March 2022

Level 3: First prize in national level project competitions, startup, business plan competition. Awarded a cash prize of ₹15,000. Organized by SGBAU Research and Incubation Foundation Center and Director Innovation Incubation and Linkage in association with PG Department of Computer Science and Engineering on 5-6 May 2022.

Shri Vile Parle Kelavani Mandal's Institute of Technology DHULE

Students Profile:

1. **Name**: Jayesh Manohar Chaudhari
   Date of Birth: 1st November 2003
   Gender: Male
   Permanent Address: 32, Navnath Nagar Depopur Dhule 424002
   Email ID: chaudharyjay140@gmail.com
   Mo. 9309457753

2. **Name**: Tejas Sunil Chaudhari
   Date of Birth: 16th January 2004
   Gender: Male
   Permanent address: Near Grampanchayat Nashirabad Tal Dist Jalgaon
   Email: tejasschaudhari123.bms@gmail.com
   Mo. 8600805203

3. **Name**: Abhijit Chhotu Patil
   Date of Birth:30th May 2003
   Gender: Male
   Permanent address: 15 Gokarn Society , Deopur Dhule 424002
   Email: abhijitpatil3053@gmail.com
   Mo. 7499378571

4. **Name**: Rushikesh Dipaksingh Girase
   Date of Birth:25th October 2003
   Gender: Male
   Permanent Address:At Post Var Kundane Tal Dist Dhule

   Email Id: rushikeshgirase2510@gmail.com
   Mo. 8275889130

Shri Vile Parle Kelavani Mandal's Institute of Technology DHULE

Department of Applied Sciences and Humanities

Project Based Learning

Case Study

Objective:

1) To increase the participation of students to demonstrate their cognitive abilities in an innovative way.

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6) Promoted to participate in various competitions.

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Execution:

Students are encouraged to participate in different completion during celebration of National Science Day. Their participation can be at individual level or at group level. They are further

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assigned mentors to groom their ideas. The evaluation team if finds their ideas innovative; they are further motivated to participate at University Level competition 'Avishkar'. The mentor faculty is also assigned to students from higher semester to take their ideas at further level to through proper grooming.

Project Title/Participation Event:

"IoT based mobile operated car"

Faculty Mentor:

Dr. Manoj Sonawane

Students Involved:

1. Anushree Sanjay Patil
2. Bhatu Santosh Patil
3. Dipak Ukha Patil
4. Ajit Patil

Start Year-End Year: 2019-20

Work Progress:

In this project our team is designed and fabricate the IoT based mobile operated small car, we have used NodMCU as processor and some sensors is there to sense the environment conditions to collect the data using this data processor taking the action and move the actuators installed in the cars tyre. These all the action taken by one android app according to the user.

Aim to making this type of project to solve the problems regarding where human contact is less by conditions this car is helpful at the time of Covid-19 pandemic to deliver the food and clothes in government hospital from 100m distance, this car is also helpful to give help at the time of fire, Flood etc. Like disaster. As engineering students, we need to give solution to the society. Further, they are incessantly motivated to participate in various competitions.

Certificate:

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SHRI VILE PARLE KELAVANI MANDAL'S

INSTITUTE OF TECHNOLOGY

DHULE

Certificate

This is to certify that

Mr / Miss Anushree Patil (F.Y. Mechanical)

had secured First / Second / ~~Third~~ / Participant position in Project / Model Presentation

competition conducted at SVKM's Institute of Technology,Dhule.

in Academic Year 2019 - 2020

We Congratulate ~~him~~ / her for this achievement.

Dr. Tushar Shinde
FE Co-ordinator

Dr. Nilesh Salunke
Principal

SHRI VILE PARLE KELAVANI MANDAL'S

INSTITUTE OF TECHNOLOGY

DHULE

Certificate

This is to certify that

Mr / ~~Miss~~ Bhatu Patil (F.Y. Mechanical)

had secured First / Second / ~~Third~~ / Participant position in Project / Model Presentation

competition conducted at SVKM's Institute of Technology,Dhule.

in Academic Year 2019 - 2020

We Congratulate him / ~~her~~ for this achievement.

Dr. Tushar Shinde
FE Co-ordinator

Dr. Nilesh Salunke
Principal

Shri Vile Parle Kelavani Mandal's Institute of Technology DHULE

SHRI VILE PARLE KELAVANI MANDAL'S
INSTITUTE OF TECHNOLOGY
DHULE

Certificate

This is to certify that

Mr / ~~Miss~~ Dipak Ukha Patil (F.Y. Mechanical)

had secured First / ~~Second~~ / ~~Third~~ / ~~Participant~~ position in Project / Model presentation

competition conducted at SVKM's Institute of Technology,Dhule.

in Academic Year 2019 - 2020

We Congratulate him / ~~her~~ for this achievement.

Dr. Tushar Shinde
FE Co-ordinator

Dr. Nilesh Salunke
Principal

SHRI VILE PARLE KELAVANI MANDAL'S
INSTITUTE OF TECHNOLOGY
DHULE

Certificate

This is to certify that

Mr / ~~Miss~~ Ajit Patil (F.Y. Mechanical)

had secured First / ~~Second~~ / ~~Third~~ / ~~Participant~~ position in Project / Model Presentation.

competition conducted at SVKM's Institute of Technology,Dhule.

in Academic Year 2019 - 2020

We Congratulate him / ~~her~~ for this achievement.

Dr. Tushar Shinde
FE Co-ordinator

Dr. Nilesh Salunke
Principal

Outcome: (Participation/Project/Paper/Patent)

This team received First Prize in National Science Day-2020 organized by Department of Applied Sciences at SVKM Institute of Technology, Dhule

Shri Vile Parle Kelavani Mandal's Institute of Technology DHULE

Students Profile:

1. **Name**: Anushree Sanjay Patil
   Date of Birth: 14th September 2001
   Gender: Female
   Permanent Address: Sakari Road , mahindale Shivar, Dhule 424001
   Email ID: anushreepatil14901@gmail.com
   Mo. 7499416851

2. **Name**: Bhatu Santosh Patil
   Date of Birth: 28/11/2000
   Gender: Male
   Permanent address: At post arvi, tell and Dist Dhule, pin-424006
   Email: bhatuspatil2000@gmail.com
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Shri Vile Parle Kelavani Mandal's Institute of Technology DHULE

Shri Vile Parle Kelavani Mandal's

Institute of Technology, Dhule

Department of Computer Engineering

Project Base Learning Activity Report

Objective:

Students are able to apply their technical knowledge, acquire practical skills in programming, get involved into team processes and understand real problem of society and try to provide solution by applying software engineering approaches.

Methodology Used:

- Students are informed about important aspects and benefits of Project Base Learning.
- Form project groups for interested students.
- Assigned faculty mentor to project group.
- Try to understand various real problems in different domains and start analysis on them.
- Discuss various problems and start finding the solutions on problem.
- Take weekly review by mentor
- Present current work in front of department faculties after end of every semester.
- Promote project work at different technical platforms like project competitions/conferences/journals.

CO's:

CO1. To identify the real world problems and domain specifications with the help of survey in recent trends in computer allied fields.

CO2. To Apply software engineering principles in planning, formulating an innovative design/ approach and computing requirements, appropriate to solve the problem within the context of legal, global and environment constraint.

CO3. To design and develop with appropriate techniques, resources and contemporary tools exhibiting integrity and ethical behaviour in engineering practice.

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CO4. Ability to plan, monitor, and manage project schedule, resources, finance and work assignments to ensure timely completion and accordingly test and defend performance of the implemented project with implication of the solution.

CO5. Ability to use formal and informal communication with team members and mentor, to perform professionally as a team member, accepting responsibility, taking initiative, and providing leadership necessary to present and prepare technical document for successful project.

POs attained (before)

1. **PO1 (Engineering knowledge)**
2. **PO2 (Problem analysis)**
3. **PO4 (Conduct investigations of complex problems).**

POs attained (after)

1. **PO1 (Engineering knowledge)**
2. **PO2 (Problem analysis)**
3. **PO3 (Design/development of solutions)**
4. **PO4 (Conduct investigations of complex problems)**
5. **PO5 (Modern tool usage)**
6. **PO6 (The engineer and society)**
7. **PO7 (Environment and sustainability)**
8. **PO8 (Ethics)**
9. **PO9 (Individual and team work)**
10. **PO10 (Communication)**
11. **PO11 (Project management and finance)**
12. **PO12 (Life-long learning)**

Subject	CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Project Base Learning	CO1	1	3		1		1	1	1	2	2	2	2
	CO2	2	2	2	2	1	1	1	1	2	2	2	2
	CO3	2	2	2	2	2	1	1	1	2	2	2	2
	CO4	2	1	2	2	2	1	1	1	2	2	2	2
	CO5	1				1	1	1	2	2	3	2	2
CO-Average		1.6	2	2	1.75	1.5	1	1	1.2	2	1.4	2	2

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PSOs attained (after)

1. PSO1 (Professional Skills)
2. PSO2 (Problem-Solving Skills)
3. PSO3 (Professional Career)

Subject	CO	PSO1	PSO2	PSO3
Project Base Learning	CO1	2	1	
	CO2	2	2	1
	CO3	3	3	2
	CO4	2	2	2
	CO5	2	1	1
CO- Average		2.2	1.8	1.5

Activity No-01

Welcome to the ***Integrated System to Provide the Healthcare for Emergency Patient*** project. The goal of these case study is to provide detail journey of this project from second year to the final year and to know the achievements of the team during development. With the help of following points we will know the details of the developments of this project.

1. **Project Title:** ***Integrated System to Provide the Healthcare for Emergency Patient***
2. **Faculty Mentor: Prof. Bhushan Nandwalkar.**
3. **Students Involve in PBL:**
   - Rewa Desale
   - Khushboo Chaudhari
   - Aarti Patil
   - Harshada Pawar
4. **Start/ End Year:**
   - Start Year – **Sept 2018**
   - End Year – **June 2021**

5. Work in Second Year (Academic Year 2018-2019): -

- In the semester –III/IV, Department was conducted one motivational session regarding innovative project development under the **Project Base Learning**.
- During this session all faculties of computer engineering shared their ideas regarding real time problem statements. During this discussion faculty realize that student are interested to work with IOT in medical, traffic, Agriculture, Military, Educational sector, Smart Cities etc.
- After discussion, faculties suggest that to students make group of 4 to 5 students and start to download latest IEEE or Springer papers for said domain and read it 2-3 times. Complete this activity up to November 2018.
- Prof. Khalid Alfatmi, Coordinator of Computer Department appoints Prof. Bhushan Nandwalkar as faculties mentor for PBL.
- Following Students form a group for PBL in second year.
   1. Rewa Desale
   2. Khusbhoo Cjaudhari
   3. Aarti Patil
   4. Harshada Pawar
   5. Ashwini Kulkarni

- Students discussed different topics or problem statements in medical domain with mentor.
- Mentor suggested that try to find out real word problems on road safety and medical emergency.
- At the end of year students discussed some problems with accident patients on road and required medical facilities.

6. Work in Third Year (Academic Year 2019-2020): -

- As per discussion held in previous semester team focus on issues of road accidents.
- Initially team reads some papers related to road accidents and services required during such situations.
- Team realize one problem that after accident patient cannot get ambulance service as well as it is very difficult to find vacant bed in nearest hospital.
- Team started detail analysis for the said problem.
- In the month of Dec 2019 team finalize required module for the project as well as technical details for the implementation and start actual implementation.
- In the month of Jan 2020 team register their **LYFsavers project in Smart India Hackathon 2020.**
- In month of April project was selected for finale round of SIH 2020 at Hyderabad but due to lockdown finale competition was postponed.
- In month of Aug SIH conducted this finale in online mode and team was secured 8th rank in Hyderabad region.

Certificates:

Certificate For

MENTOR

This Certificate is awarded to

Bhushan Nandwalkar

of team LYFsavers

For Participating as Mentor in

"Smart India Hackathon 2020"

SMART INDIA HACKATHON 2020

SOFTWARE EDITION

Grand Finale

1st, 2nd & 3rd Aug. 2020

Sh. Amit Khare
Secretary, Higher Education
Ministry of Education
Government of India

Dr. Anil D Sahasrabudhe
Chairman, AICTE
Chairman, Organizing Committee
Smart India Hackathon 2020

Dr. Abhay Jere
CIO,MIC,MHRD
Organizing Committee
Smart India Hackathon 2020

Dr. Anand Deshpande
Chairman and MD, Persistent Systems
Co-Chairman, Organizing Committee
Smart India Hackathon 2020

Certificate of

PARTICIPATION

This Certificate is awarded to

Rewa Narendra Desale

of team LYFsavers

for participating in

"Smart India Hackathon 2020"

SMART INDIA HACKATHON 2020

Grand Finale

Sh. Amit Khare

Certificate of
PARTICIPATION
This Certificate is awarded to
Khushboo Kiran Chaudhari
of team LYFsavers
for participating in
"Smart India Hackathon 2020"

SMART INDIA HACKATHON 2020
SOFTWARE EDITION
Grand Finale
, 2nd & 3rd Aug, 2020

MHRD aws DEVNET intel KPIT

Certificate of
PARTICIPATION
This Certificate is awarded to
Harshada Vilas Pawar
of team LYFsavers
for participating in
"Smart India Hackathon 2020"

SMART INDIA HACKATHON 2020
SOFTWARE EDITION
Grand Finale
, 2nd & 3rd Aug, 2020

MHRD aws DEVNET intel KPIT

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7. Work in Final Year (Academic Year 2020-2021): -

- Now team was in final year and after securing 8th rank in SIH 2020 still team wants to add new things to their project and register this project as final year project with major modification.
- Team started new requirement analysis for the project and found something new like required automation as well as hardware part for the project and register final year project as ***Integrated System to Provide the Healthcare for Emergency Patient.***
- **General abstract of project-**

  Healthcare emergency becomes risky when the emergency patients won't get healthcare facility in time and in a proper way. Surveys done by private NGO's, the reports generated by government proves that people/ citizen of India won't get healthcare facility in time because of un-awareness about doctor's list, hospitals services. According to various articles published by newspapers and news shown by electronic media, we observed that people faced issues to get access to these facilities and this is one of the main reasons behind the death. To overcome the problem faced by an emergency patient from getting ambulance service till the acceptance of the patient by the hospital, we proposed a solution which helps patient to get the healthcare service in time, using our website, patient or his/her caretaker may contact to the nearest hospital for the service. Our website contains nearest doctors', hospital's list, phone numbers, mobile numbers, bed available,

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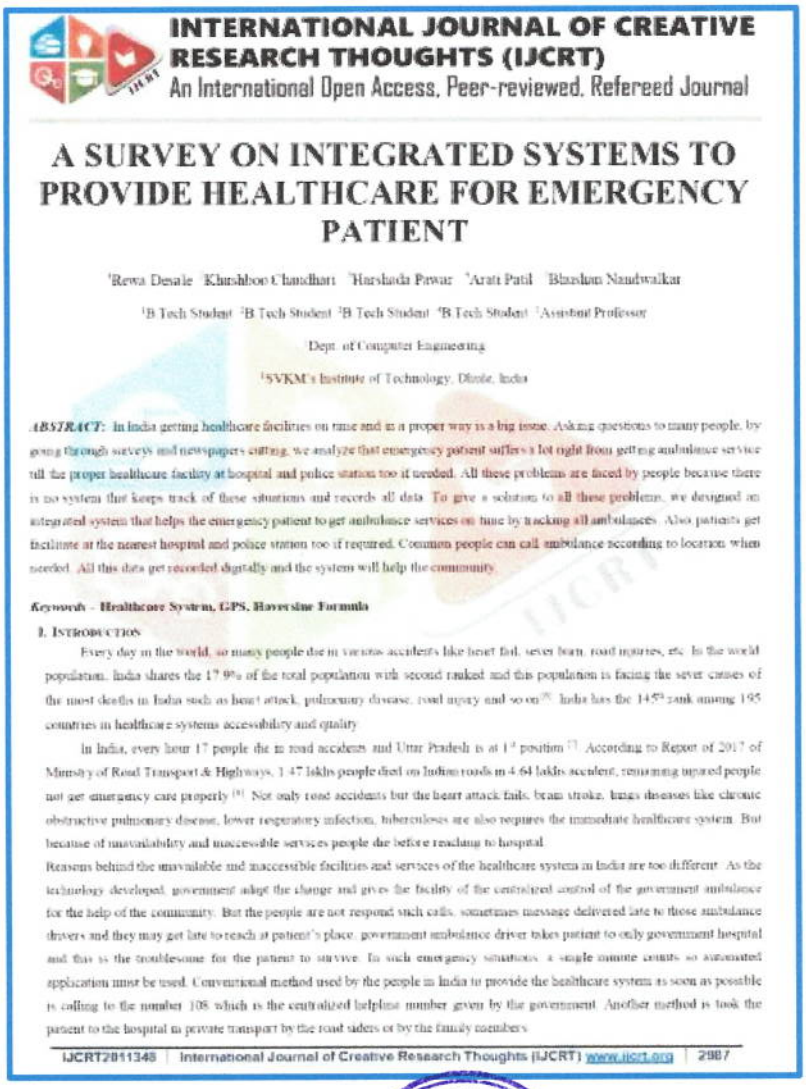
services provided by the hospital, total expenses required, etc. All events will be recorded by the system and this helps to strengthen the healthcare system and the needy one. We here also proposed a system for accident detection using IOT, Node MCU- which senses the vehicle parameters like speed, impact, and using smartphone with Blynk application software, we come to know about vehicle accident category like medium or severe. When an accident happens to the vehicle, Node MCU using sensor senses the severeness and accordingly. Node MCU sends an alert message and GPS location of the accident on a smart-phone of the nearest ambulance driver and owner. So that, using location coordinates, he/she will give the service to accident patients.

- Finally, project was completed in month of Feb 2020.
- Team Published Two Research papers on project in international journal.

8. Paper Published: -



INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)
An International Open Access, Peer-reviewed, Refereed Journal

A SURVEY ON INTEGRATED SYSTEMS TO PROVIDE HEALTHCARE FOR EMERGENCY PATIENT

[1]Rewa Desale [2]Khushboo Chaudhari [3]Harshada Pawar [4]Arati Patil [5]Bhushan Nandwalkar

[1]B Tech Student [2]B Tech Student [3]B Tech Student [4]B Tech Student [5]Assistant Professor

Dept. of Computer Engineering

[1]SVKM's Institute of Technology, Dhule, India

ABSTRACT: In India getting healthcare facilities on time and in a proper way is a big issue. Asking questions to many people, by going through surveys and newspapers cutting, we analyze that emergency patient suffers a lot right from getting ambulance service till the proper healthcare facility at hospital and police station too if needed. All these problems are faced by people because there is no system that keeps track of these situations and records all data. To give a solution to all these problems, we designed an integrated system that helps the emergency patient to get ambulance services on time by tracking all ambulances. Also patients get facilitate at the nearest hospital and police station too if required. Common people can call ambulance according to location when needed. All this data get recorded digitally and the system will help the community.

Keywords **- Healthcare System, GPS, Haversine Formula**

I. INTRODUCTION

Every day in the world, so many people die in various accidents like heart fail, sever burn, road injuries, etc. In the world population, India shares the 17.9% of the total population with second ranked and this population is facing the sever causes of the most deaths in India such as heart attack, pulmonary disease, road injury and so on[9]. India has the 145th rank among 195 countries in healthcare systems accessibility and quality.

In India, every hour 17 people die in road accidents and Uttar Pradesh is at 1st position [7]. According to Report of 2017 of Ministry of Road Transport & Highways, 1.47 lakhs people died on Indian roads in 4.64 lakhs accident, remaining injured people not get emergency care properly [8]. Not only road accidents but the heart attack fails, brain stroke, lungs diseases like chronic obstructive pulmonary disease, lower respiratory infection, tuberculoses are also requires the immediate healthcare system. But because of unavailability and inaccessible services people die before reaching to hospital.

Reasons behind the unavailable and inaccessible facilities and services of the healthcare system in India are too different. As the technology developed, government adopt the change and gives the facility of the centralized control of the government ambulance for the help of the community. But the people are not respond such calls, sometimes message delivered late to those ambulance drivers and they may get late to reach at patient's place, government ambulance driver takes patient to only government hospital and this is the troublesome for the patient to survive. In such emergency situations, a single minute counts so automated application must be used. Conventional method used by the people in India to provide the healthcare system as soon as possible is calling to the number 108 which is the centralized helpline number given by the government. Another method is took the patient to the hospital in private transport by the road siders or by the family members.

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www.iosrjournals.org

A Lifesaver: Healthcare System For Road Accident And Emergency Patient

Rewa Desale[1], Khushboo Chudhari[2], Harshada Pawar[3], Arati Patil[4], Bhushan Nandwalkar[5]
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Abstract. *Healthcare emergency becomes risky when the emergency patients won't get healthcare facility in time and in a proper way. Surveys done by private MAO's, the reports generated by government proves that people, citizen of India won't get healthcare facility in time because of un-awareness about doctor's list, hospitals services. According to various articles published by newspapers and news shown by electronic media, we observed that people faced issues to get access to these facilities and this is one of the main reason behind the death. To overcome the problem faced by an emergency patient from getting ambulance service till the acceptance of the patient by the hospital, we proposed a solution which helps patient to get the healthcare service in time, using our website, patient or his/her caretaker may contact to the nearest hospital for the service otherwise if road accident happen to car then system is design to sense the accident and contact the nearest ambulance service. Our website contains nearest doctors', hospital's list, phone numbers, mobile numbers, bed available, services provided by the hospital, total expenses required, etc. All events will be recorded by the system and this helps to strengthen the healthcare system and the needy one.*

Keywords: *GPS, Haversine Formula, Node MCU, Gyroscope, Smart Phone, Blynk, Healthcare.*

Date of Submission: 25-05-2021 Date of Acceptance: 09-06-2021

1. Introduction

Each day there are almost 150000 people die in the world [7]. Reasons behinds the deaths are various diseases or road accidents or any other incident. But most of the people die because of diseases and road accidents. The diseases that can cause death are – cancer, cardiovascular diseases, respiratory diseases, dementia, diarrheal diseases, etc. These mention diseases are very fatal in nature. Not only diseases but road accidents are also the major cause of deaths.

In India, out of 1000 people, 7.3 people are dying per day [9]. According to the statistics generated by the Indian government, the national newspaper Times of India done the analysis and according to them, there are top 10 reasons behind this huge number of death rate, out of which heart attack failure is at 1st position. Likewise lung diseases, stroke, pneumonia, diarrheal diseases, tuberculosis, diabetes, problems regarding kidney, preterm birth, and road accidents [8]. Since 2020, covid-19 is also one of the reason behind deaths. These diseases are categories into types – communicable and non-communicable diseases. In the case of communicable diseases, the patient can express the pain that they are feeling. But this is not possible in the case of non-communicable diseases and this is very risky because the person who suffers is not able to take the help of service or call the service. When such a situation occurs every patient requires immediate help from the healthcare system. Because of inaccessible as well as unavailability of healthcare services people won't get proper medical facilities and they may die before reaching the hospital.

In India, unavailability, as well as the inaccessibility of resources, is a big issue. Technology is enhancing day by day and becoming a part of each and every field. As the government of India adopt the technology and did the changes in the healthcare system too. They make centralized control of ambulance service by connecting all government ambulance to a single system to help the community. But the rate of illiteracy regarding technology in society is high and people won't know how to use it. People involved in the healthcare system won't reply when common people want to reach out to them. When people call for ambulance service they won't reply to their calls. Otherwise, the message delivers late to the authentic person and the ambulance gets late to reach the desired destination. If the ambulance came then the patient is taken to the government hospital for most of the time instead of taking them to the nearest hospital. This can cause an

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IOSR Journals

International Organization of Scientific Research

Certificate

Office Code	41867	Date	2021-06-08
IRC No	2854	Status	Published

Article Details

This is to certify that following paper has been published in IOSR Journals:

Article Title	A Lifesaver Healthcare System For Road Accident And Emergency Patient
Author's Name	Rewa Desale , Khushboo Chaudhari , Harshada Pawar , Aarti Patil , Bhushan Nandwalkar
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Article DOI	10.9790/0661-2303014046

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International Organization of Scientific Research || www.iosrjournals.org

9. Patent

- Department file patent of this project in month of March 2022.
- Principal, HOD of Computer Engg. and all staff congratulate the team for patent filed.

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Office of the Controller General of Patents, Designs & Trade Marks
Department of Industrial Policy & Promotion,
Ministry of Commerce & Industry,
Government of India

(http://ipindia.nic.in/index.htm)

INTELLECTUAL PROPERTY INDIA (http://ipindia.nic.in/index.htm)

Application Details

APPLICATION NUMBER	202221016228
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	23/03/2022
APPLICANT NAME	**1 . Mr. Bhushan Nandwalkar** **2 . Dr. Makrand Shahade** **3 . Mr. Khalid Alfatmi** **4 . Mr. Tukaram Gawali** **5 . Mr. Ashish Awate** **6 . Ms. Vijaylaxmi Bittal** **7 . Ms. Mayuri Kulkarni** **8 . Mr. Umakant Mandawkar** **9 . Mr. Ranjit Fule** **10 . Ms. Rewa Desale**
TITLE OF INVENTION	INTEGRATED SYSTEM TO PROVIDE THE HEALTHCARE FOR EMERGENCY PATIENT
FIELD OF INVENTION	COMPUTER SCIENCE
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ADDITIONAL-EMAIL (As Per Record)	dr.bksarkar2003@gmail.com
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	15/04/2022

Application Status

Shri Vile Parle Kelavani Mandal's DHULE Institute of Technology

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8. Paper Published : 2

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8. Paper Published :2

Prof. Bhushan Nandwalkar
PBL, Coordinator

Dr. Makarand Shahade
HOD, Dept. of Comp. Engg

Shri Vile Parle Kelavani Mandal's DHULE Institute of Technology

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SVKM's Institute of Technology, Dhule

Shri Vile Parle Kelavani Mandal's
Institute of Technology, Dhule
Approved by AICTE & Affiliated to DBATU
DEPARTMENT OF COMPUTER ENGINEERING

AIWIZ Tech: A Journey of Innovation and Success

Team Background

Team Name: AIWIZ Tech
Team Members: Jayesh Chaudhari, Tejas Chaudhari, Abhijit Patil, Rushikesh Girase, Vaibhav Jare, Gaurav Shirude, Jaykishan Verma, Tejas Bagul, Devyani Jadhav, Aarya Borse, Shreyash Chadawadkar,

Mentor: Prof. Ashish Awate

Affiliated Institution: SVKM's Institute of Technology, Dhule

Competitions and Achievements

1. **IEEE IDEATHON COMPETITION:**
   - Second Position.
   - Awarded a cash prize of ₹2500.
   - Our Research Paper Published in IEEE WIE E-Tantra Magazine.
   - Organized by IEEE WIE Affinity Group Bombay Section with D.Y. Patil Deemed to University RAIT College of Engineering, Nerul, Navi Mumbai on 5 Aug 2023.
2. **Avishkar National Level Idea Competition 2023:**
   - First Position.
   - Awarded a cash prize of ₹2000.
   - Organized by the Department of Computer Engineering in association with SVKM'S Institute of Technology ACM Student Chapter in 2023.
3. **IMPETUS: International Level Project Competition and Exhibition:**
   - Second prize.

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- Held at Pune Institute of Computer Technology on 23 April.
- Opportunity to showcase skills, knowledge, and product in image and video processing for security and surveillance.

4. **Avishkar 2022 :**
   - First winner in engineering and technology sector.
   - Institute level round at SVKM's Institute of Technology, Dhule.

5. **Maharashtra Startup Yatra 2022:**
   - First prize in the Smart Infra and Mobility sector.
   - Awarded a cash prize of ₹1,00,000.
   - Felicitated at Raj Bhavan Mumbai by the Governor of Maharashtra and Deputy Chief Minister of Maharashtra.
   - Organized by Maharashtra State Innovation Society on 13-14 October 2022.
6. **Maharashtra Startup Yatra 2022 [District Level]:**
   - First prize in the Smart Infra and Mobility sector at Dhule district.
   - Awarded a cash prize of ₹25,000.
   - Organized by Maharashtra State Innovation Society.
7. **Avishkar National Level Idea Competition:**
   - First prize in the National Level Idea Competition.
   - Awarded a cash prize of ₹1500.
   - Organized by the Department of Computer Engineering in association with SVKM's IoT ACM student chapter on 4th June 2022.
8. **Annual National Project Competition, Startup, Business Plan Competition:**
   - First prize in national level project competitions, startup, business plan competition.
   - Awarded a cash prize of ₹15,000.
   - Organized by SGBAU Research and Incubation Foundation Center and Director Innovation Incubation and Linkage in association with PG Department of Computer Science and Engineering on 5-6 May 2022.
9. **District Level Project Competition:**
   - First prize in district level project competition.
   - Organized by Sri Vile Parle Kelavani Mandal's Institute of Technology in association with DTE, regional office Nashik, and Shikshan Maharshi Dadasaheb Rawal Government Polytechnic Technique Dhule on 11th March 2022.
10. **SVKM's IoT, Dhule Project Competition:**
    - Second prize in project and model competition.

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- Organized by SVKM's IoT, Dhule on Science Day.

Projects

1. **INDRA:**
   - Started on January 2022.
   - Focuses on human detection and human counting and activity recognition using artificial intelligence via image, video, and camera.
   - Generates results and sends insights on WhatsApp automatically.
   - Technologies: Machine learning, OpenCV, Python.
2. **VAYU:**
   - Started on March 2022.
   - Focuses on the extraction of facial features and characteristics of the human face in real-time.
   - Generates results and sends insights on WhatsApp automatically.
   - Technologies: OpenCV, artificial intelligence, Python, Kaggle Dataset.
3. **DARSH:**
   - Started on August 2022.
   - Focuses on vehicle detection, vehicle counting, and number plate extraction.
   - Generates analysed and precise results.
   - Technologies: Artificial intelligence, OpenCV, Python.
4. **DHWANI:**
   - Started on April 2022.
   - Focuses on sentimental analysis and emotion detection by human voice.
   - Speech emotion recognition.
   - Technologies: Artificial intelligence, machine learning, Pyaudio, Python, voice dataset.
5. **Air Monitoring System:**
   - Started in April 2022.

- Focuses on detecting the concentrations of different gases and environmental factors for air quality index.
- Generates results easily displayed on our LCD display.
- Technologies: IoT.

6. **Air/Environment Monitoring System for Warehouse Air Quality Detection:**
    - Focuses on giving alerts to the warehouse team for changes in unfavourable conditions or factors in the warehouse.
    - Technologies: IoT.

7. **D-VISION:**
    - Started in June 2023.
    - Focuses on converting 2D images of sporting incidents into 3D model events for precise decision-making.
    - Technologies: Computer vision.

Patent

AIWIZ Tech is proud to announce the successful patent filing for our innovative technology:

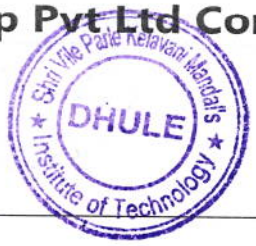
Title of the Invention: Real-Time Surveillance System Using Artificial Intelligence to Get Precise Insights and Results for Security and Surveillance Purposes.

Date of Patent Filing: 13 JAN 2023

Mentorship

AIWIZ Tech has been fortunate to have Prof. Ashish Awate as a mentor, guiding the team both technically and in the startup realm. Prof. Ashish Awate is also a partner in the private limited company, providing valuable insights and support.

Incorporation of Startup Pvt Ltd Company



After winning the Maharashtra Startup Yatra at the state level, AIWIZ Tech made the strategic decision to incorporate AIWIZ Tech Solutions Pvt Ltd. AIWIZ Tech Solutions Pvt Ltd was officially incorporated on 18 AUG 2023. The company's mission is to provide innovative technological solutions that address market needs and challenges. It focuses on developing cutting-edge products, services, and software applications that leverage artificial intelligence, machine learning, and computer vision technologies.

AIWIZ Tech Solutions Pvt Ltd's core business areas include automation, security, and surveillance solutions. These offerings empower businesses, organizations, and public authorities with the tools and insights needed to identify threats, respond swiftly to security incidents, and ensure the safety of individuals and assets.

Prof. Ashish Awate

Mentor

Shri Vile Parle Kelavani Mandal's DHULE Institute of Technology

Dr.Makrand Shahade

HoD

Computer Engg.Department.

H.O.D. Computer Dept.
SVKM's Institute of Technology,Dhule

Shri Vile Parle Kelavani Mandal's

Institute of Technology, Dhule

Approved by AICTE & Affiliated to DBATU

Department of Computer Engineering

Academic Year: 2022-23

KAVACH 2023 Winning Team Report

About KAVACH 2023: MoE's Innovation Cell, AICTE along with Bureau of Police Research and Development (BPR&D)(MHA) and Indian Cybercrime Coordination Centre (I4C)(MHA) have launched 'KAVACH-2023' a unique national Hackathon to identify innovative concepts and technology solutions for addressing the security challenges of the 21st century faced by our intelligence agencies.KAVACH-2023 is conceived to challenge India's innovative minds to conceptualize ideas and framework in the domain of cyber security using artificial intelligence, deep learning, machine learning, automation, big data and cloud computing.

Winning Team Details: Tech-Rakshak

1. Nishad Patil (Team Leader)
2. Chetan Kachhava
3. Yash Patil
4. Shubham Argade
5. Gagan Jarsodiwala
6. Netra Chaudhari

(Students of B.Tech Computer Engineering 2024 batch)

Mentor:

1. Prof. Khalid Alfatmi
2. Prof. Vijaylaxmi Bittal

Problem Statement:	KVH-019, Solution for auditing propriety cellular/portable electronic device hardware
Domain:	Cyber Security Audit
Venue / Nodal Centre:	Centurion University of Technology and Management, Bhubaneshwar
Competition Date:	8th & 9th August 2023

Sample Certificate of Winner:

Shri Vile Parle Kelavani Mandal's

Institute of Technology, Dhule

Approved by AICTE & Affiliated to DBATU

Department of Computer Engineering

Academic Year: 2022-23

News of the winning team:

दिव्य मराठी धुळे सिटी 29-08-2023

हॅकेथॉन स्पर्धेत एसव्हीकेएमचे विद्यार्थी अव्वल

प्रतिनिधी | शिरपूर

धुळे येथील एसव्हीकेएम अभियांत्रिकी महाविद्यालयाच्या टेक-रक्षक संघाने कवच-सायबर सुरक्षा राष्ट्रीय हॅकेथॉन स्पर्धेत यश मिळवले. स्पर्धेत विद्यार्थ्यांनी एक लाख रुपयांच्या बक्षिसासह प्रथम क्रमांक मिळवल्याची माहिती प्राचार्य डॉ. नीलेश साळुंके यांनी दिली.

केंद्रीय शिक्षण मंत्रालयाचा इनोव्हेशन सेल, पोलिस संशोधन, विकास ब्युरो आणि इंडियन सायबर क्राइम कोऑर्डिनेशन सेंटरतर्फे ही स्पर्धा झाली. स्पर्धेत विविध मंत्रालय, सरकारी आणि खासगी

राष्ट्रीय हॅकेथॉन स्पर्धेतील विजेत्यांना बक्षीस देताना मान्यवर.

संस्थांच्या समस्यांवर अभियांत्रिकी महाविद्यालयातील विद्यार्थ्यांनी प्रकल्प सादर केले. स्पर्धेत सॉफ्टवेअर या श्रेणीमध्ये महाविद्यालयाच्या टेक-रक्षक संघाने सेल्युलर/पोर्टेबल इलेक्ट्रॉनिक उपकरण हार्डवेअर ऑडिटिंग गुणधर्मांसाठी उपाय या समस्येवर प्रा. विजयलक्ष्मी बित्तल, प्रा. खालिद अल्फात्मी यांच्या मार्गदर्शनाखाली प्रबंध सादर केला. तृतीय वर्ष संगणक विभागातील निषाद पाटील, चेतन कछावा, यश पाटील, शुभम अरगडे, गगन जरसोडीवाला आणि नेत्रा चौधरी यांचा समावेश होता. विद्यार्थ्यांना प्राचार्य डॉ. नीलेश साळुंके, डॉ. मकरंद शहाडे, प्रा. उमाकांत मांडवकर, प्रा. भूषण नांदवलकर, प्रा. आशिष आवटे, प्रा. किरण सोमवंशी, अनमोल सूर्यवंशी आदींचे मार्गदर्शन लाभले. विद्यार्थ्यांच्या यशाबद्दल आमदार अमरीश पटेल, सह-अध्यक्ष भूपेश पटेल, उपाध्यक्ष चिंतन पटेल, राजगोपाल भंडारी, संजय अग्रवाल, डॉ. अजय पसारी, प्राचार्य डॉ. नीलेश साळुंके यांनी समाधान व्यक्त केले आहे.

Felicitation of team at Institute:

Shri Vile Parle Kelavani Mandal's Institute of Technology DHULE

Prof. Khalid Alfatmi
Team Mentor

Dr. Makarand Shahade
H.O.D, Computer Engineering

Shri Vile Parle Kelavani Mandal's
Institute of Technology, Dhule
Approved by AICTE & Affiliated to DBATU
Department of Computer Engineering
Academic Year: 2022-23

KPIT SPARKLE

About KPIT Sparkle 2023:

KPIT Sparkle has been a powerful catalyst for driving mobility and sustainable energy innovation for the last decade. The platform brings together mentors and young professionals passionate about mobility and energy. It is building an ecosystem that encourages and inspires budding professionals to solve everyday problems with innovative, sustainable & indigenous solutions.

The total submissions of idea in KPIT Sparkle 2023 were from all over the India in which 1000+,more than 12000 students from 500+ colleges participated. Among them from our Institute the team register and selected in top 100.The details of competition:

Project Title: "Early Pest Detection with pesticide recommendation using image processing and automotive pesticide spraying"

Sparkle Id: INSP23000634

Team Members Selected in Pre-Finale (Top 100)

1. Bhavesh Nikam (Computer Engg)
2. Nilesh Khandekar (Computer Engg)
3. Sakshi Mandwekar (Computer Engg)
4. Sakshi Pande (Computer Engg)
5. Vinit Bhatia (Electrical Engg)

Team Mentors :

- Prof. Mayuri Kulkarni (Assistant Professor, Dept of Computer Engg)
- Dr. Vishal Moyal (HoD, Assistant Professor, Dept of Electrical Engg)

Project Domain :

- IOT
- Image Processing

Shri Vile Parle Kelavani Mandal's Institute of Technology DHULE

Certificates of the students

KPIT | SPARKLE

Mobility & Energy for the Future

This certificate is proudly presented to

Nilesh Khandekar

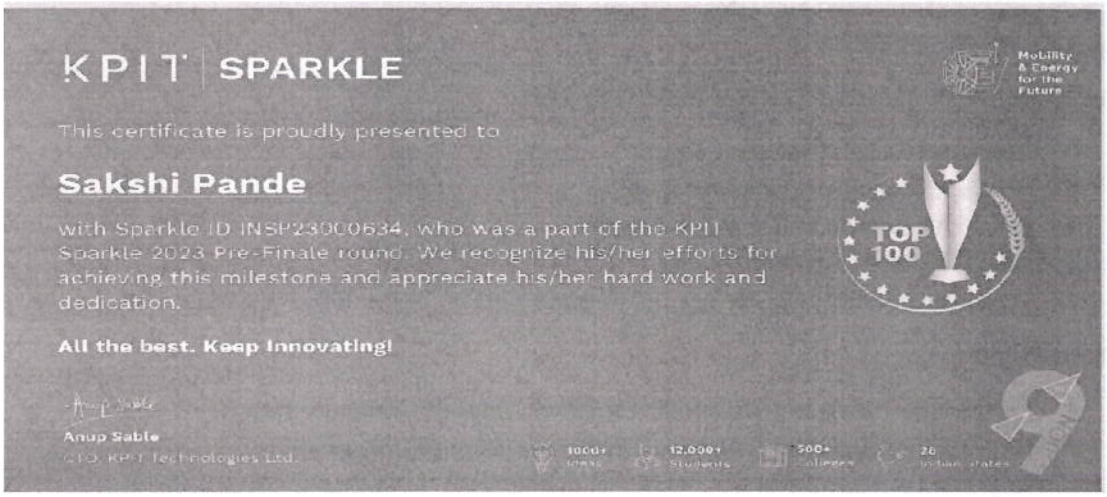
with Sparkle ID INSP23000634, who was a part of the KPIT Sparkle 2023 Pre-Finale round. We recognize his/her efforts for achieving this milestone and appreciate his/her hard work and dedication.

TOP 100

All the best. Keep Innovating!

Anup Sable
CTO, KPIT Technologies Ltd.

1000+ Ideas | 12,000+ Students | 500+ Colleges | 28 Indian States


KPIT | SPARKLE

Mobility & Energy for the Future

This certificate is proudly presented to

Sakshi Pande

with Sparkle ID INSP23000634, who was a part of the KPIT Sparkle 2023 Pre-Finale round. We recognize his/her efforts for achieving this milestone and appreciate his/her hard work and dedication.

TOP 100

All the best. Keep Innovating!

Anup Sable
CTO, KPIT Technologies Ltd.

1000+ Ideas | 12,000+ Students | 500+ Colleges | 28 Indian States

KPIT | SPARKLE

Mobility & Energy for the Future

This certificate is proudly presented to

Sakshi Mandwekar

with Sparkle ID INSP23000634, who was a part of the KPIT Sparkle 2023 Pre-Finale round. We recognize his/her efforts for achieving this milestone and appreciate his/her hard work and dedication.

TOP 100

All the best. Keep Innovating!

Anup Sable
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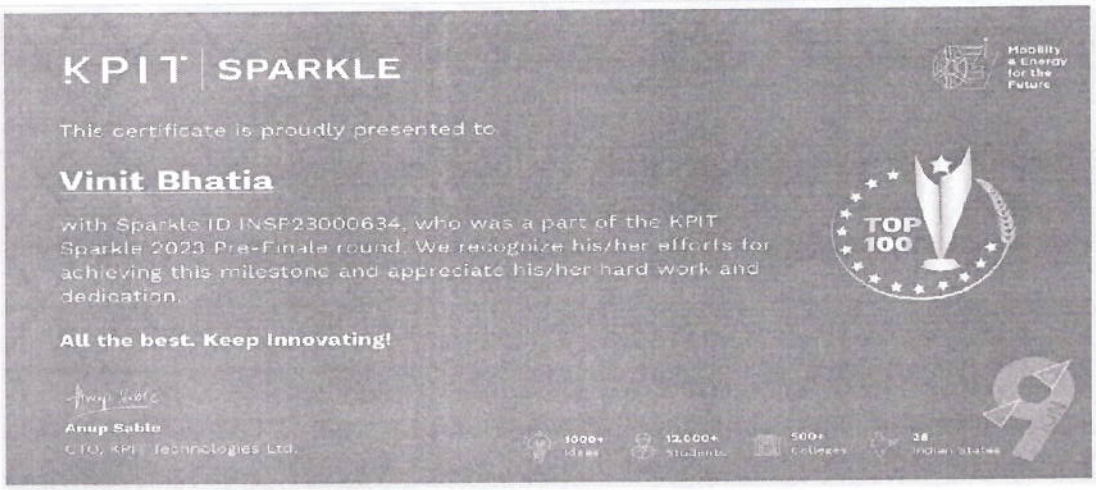
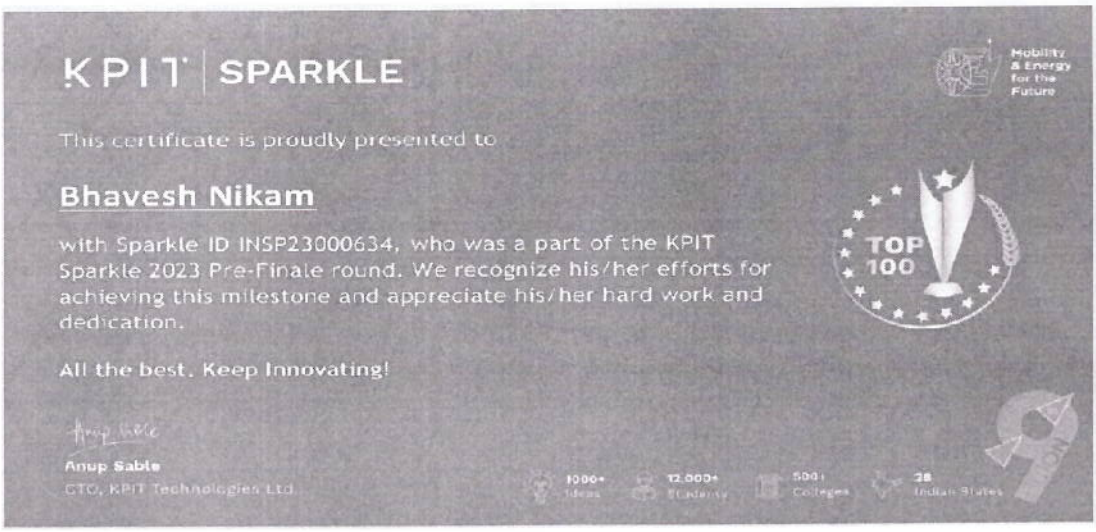
Shri Vile Parle Kelavani Mandal's Institute of Technology DHULE





Prof. Mayuri Kulkarni

Mentor

Dr. Makarand Shahade

HoD Computer Engg

H.O.D. Computer Dept.
SVKM's Institute of Technology, Dhule

Shri Vile Parle Kelavani Mandal's Institute of Technology DHULE

Shri Vile Parle Kelavani Mandal's

Institute of Technology, Dhule

Department of Civil Engineering

Project Based Learning Activity Report

Objective:

The objective is to empower students with the ability to apply their technical acumen, cultivate practical knowledge and skills, actively engage in collaborative teamwork, develop a deep understanding of societal challenges, and formulate innovative solutions to real-world problems in the field of civil engineering.

Methodology Used:

- **Students are informed about important aspects and benefits of Project Base Learning.**
- **Form project groups for interested students.**
- **Assign faculty mentor to project group.**
- **Try to understand various real problems in different Civil Engineering domains and start analysis on them.**
- **Discuss various problems and start finding the solutions on problem.**
- **Take weekly review by mentor**
- **Present current work to the department faculties in every semester.**
- **Promote project work at different technical platforms like project competitions/conferences/journals.**

Shri Vile Parle Kelavani Mandal's DHULE Institute of Technology

Activity No-02

Develop an Empirical relation between SPT blow count and shear wave velocity for Dhule District.

The goal of these case study is to provide detail journey of this project from second year to the final year and to know the achievements of the team during development. With the help of following points we will know the details of the developments of this project.

1. **Project Title:** Develop an Empirical relation between SPT blow count and shear wave velocity for Dhule district
2. **Faculty Mentor:** Prof. Yogesh Bafna
3. **Students Involve in PBL:**
   - More Aakash Mangilal (PRN-20171119110001)
   - Wagh Ujwal Anil (PRN-20171119110025)
   - Sonawane Kalpesh Tryambak (PRN-20171119110041)
   - Chaudhari Pritesh Vilas (PRN-20181119110004)
   - Shinde Jatin Sanjiv (PRN-20171119110033)
   - Chandwani Gaurav Hares (PRN-20181119110001)
   - Kachave Mayur Uddhav (PRN-20171119110027)
4. **Start/ End Year:**
   - Start Year – **Sept 2019**
   - End Year – **June 2022**

5. **Work in Second Year (Academic Year 2019-2020): -**

- In the semester –III/IV, Department was conducted a session regarding innovative project development under the **Project Based Learning**.
- During this session all faculties of Civil engineering shared their ideas and problem statements. After discussion following areas of interest were selected:
  - Geotechnical Engineering
  - Design of Sewage Treatment Plant
  - Design of Water supply scheme
- Students groups were formed and asked to start with literature review to have better understanding of the area. Deadline to Complete this activity was March 2020.
- Prof. Yogesh Bafna was appointed faculty mentor based on the area selected by students.
- Following Students form a group for PBL in second year.
  - More Aakash Mangilal (PRN-20171119110001)
  - Wagh Ujwal Anil (PRN-20171119110025)
  - Sonawane Kalpesh Tryambak (PRN-20171119110041)
  - Chaudhari Pritesh Vilas (PRN-20181119110004)
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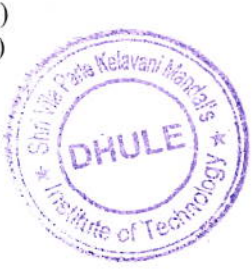


- Students discussed area of interest and start to study prerequisite of the same related to field of Soil Mechanics.
- Students were suggested to visit lab and learn various tests on soil once college reopens. Meanwhile, they have gone through experiments using Virtual Lab.

6. Work in Third Year (Academic Year 2020-2021): -

- As per discussion held in previous semester team prepared a detailed literature review report and choose the area for final year project.
- Next Students started to perform soil tests in laboratory as well as on field for consultancy project under guidance.
- Various properties of different types of soil were determined like Physical, Index properties etc.

7. Work in Fourth Year (Academic Year 2021-2022): -

- The team developed the empirical relation between SPT blow count and Resilient modulus as their final year project
- For developing said relation, student collected samples through Dhule District then performed field test on site and remaining test within laboratory like G, density and CBR as well as Cyclic CBR for M_r.

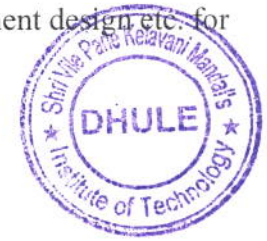
Abstract of the project of project-

To check the performance of the flexible pavement during construction and throughout service life based on geotechnical properties is time consuming process and it depends upon dynamic soil properties i.e., subgrade modulus. Subgrade modulus can be determine using shear wave velocity and resilient modulus. To evaluate the performance of road subgrade and subbase using conventional method is a time and resources consuming. A lot research work has been carried out, to predict the performance of subgrade and subbase considering soil properties based on field and laboratories techniques. In this project an attempt is made to develop an empirical relationship between soil properties, SPT Blow count and shear wave velocity.

Consultancy

Based on the above acquired skill of soil testing, students started to perform vital role in soil testing consultancy assignment like physical properties, index properties based on these properties determination of bearing capacity of soil, pavement design etc. for following Parties

- Government Agencies like PWD, MJP, ZP.



- R. A. Ghule
- Tejas construction
- Pragati Construction

Shri Vile Parle Kelavani Mandal's

Institute of Technology, Dhule

Department of Civil Engineering

Project Based Learning Activity Report

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Shri Vile Parle Kelavani Mandal's DHULE Institute of Technology

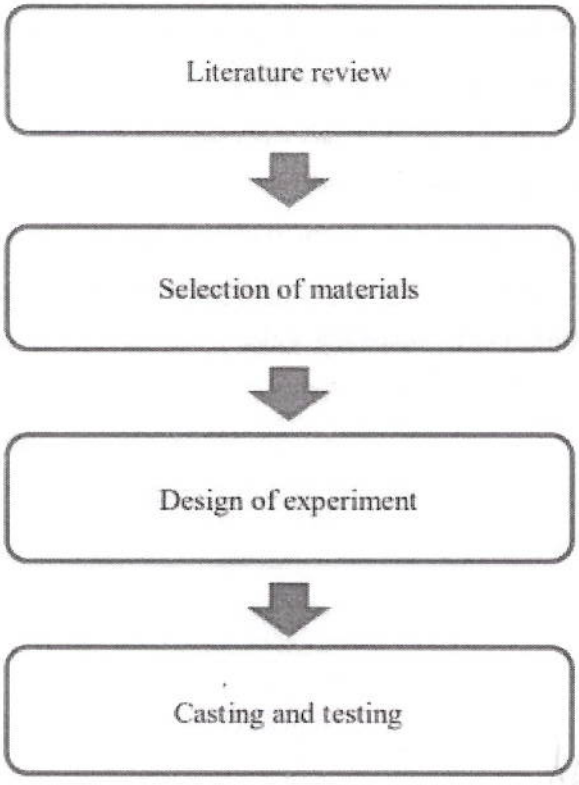
Activity

Statistical modelling of properties of Pervious concrete using Taguchi Analysis

1. **Project Title:** A Statistical modelling of properties of Pervious concrete using Taguchi Analysis
2. **Faculty Mentor: Prof. Achal Agrawal**
3. **Students Involve in PBL:**
    - **Paras Rajendra Haral (PRN: -1954491191043)**
    - **Mayur Kailas Chavan (PRN: -1954491191016)**
    - **Sakshi Jitendra Jadhav (PRN: -1954491191012)**
    - **Trupti Rajendra More (PRN: -1954491191015)**
    - **Prathmesh Ramesh Bhamare (PRN: -1954491191013)**
    - **Bhumika Bhalchandra Baviskar (PRN: -21544920181119111002)**

4. **Start/ End Year:**
    - Start Year – **Sept 2021**
    - End Year – **June 2022**

5. **Work in Last Year Phase-I (Academic Year 2021-22): -**



6. **Work in Last Year Phase-II (Academic Year 2021-2022): -**

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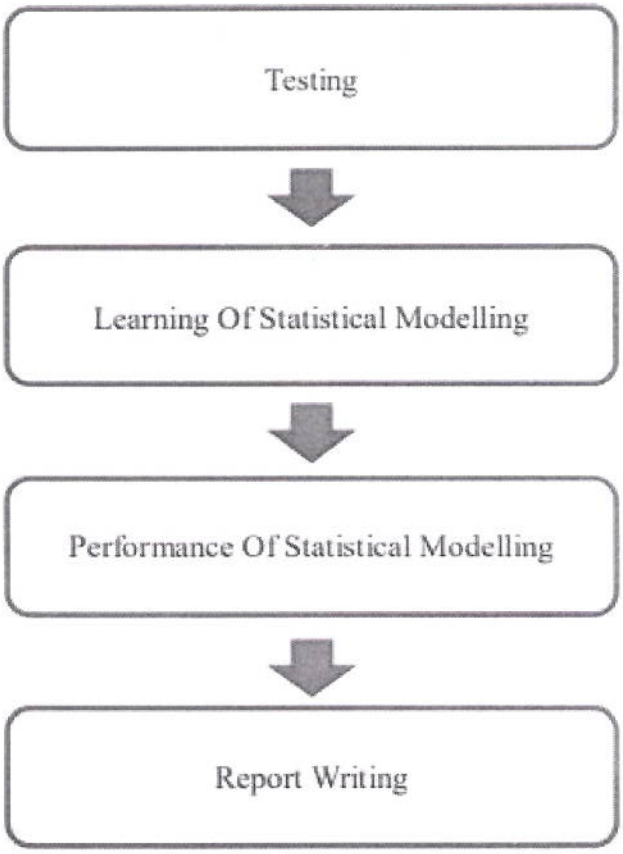

Abstract of the project of project-

Pervious concrete is a special type of concrete made by the mixture of water, cement and open graded coarse aggregates. Typically, it has little to no fine aggregate concrete and has just enough cementations paste to coat the aggregates particle while maintaining the inter connectivity of the voids. Pervious concrete is also known as porous concrete, permeable concrete, no fines concrete, gap graded concrete, enhanced porosity concrete. This study represents the experimental methodology and experimental results related to compressive strength, flexural strength and permeability. By using Taguchi analysis for design of experiment in which L9 arrays was used were we had 3 variable factors which were mix proportion, percentage of fine aggregates and percentage of human hairs as fibers with 3 levels each. In this the w/c ratio of 0.4 were taken while varing the proportions of human hair as fibers of fine aggregate with coarse aggregates from 0.25%, 0.50%, 0.75% of human hair of 0%, 5% and 10% of fine aggregate respectively in each proportion. Whose results give the range of compressive strength from 1.45 and 3.48 N/mm² maximum of M9 mix and flexural strength from 0.135 to 2.11 N/mm² maximum of M9 mix while permeability ranging from 91.67 m/hr to 163.70 m/hr maximum of M8 mix. Which shows as we increase the fibers it helps to improve the flexural strength and by increase in fine aggregates it improves the compressive strength simultaneously.

Conclusion of Project

- The compressive strength can be varied from minimum 1.45 to maximum 3.48 N/mm2 , and flexural strength can be varied from 0.135 to 2.11 N/mm2 minimum to maximum.
- The permeability can be varied from minimum 91.67 to maximum 163.70 m/hr.
- Compressive and flexural strength of M9 mix by using 10% fine aggregate is more as compared to other mix.

Shirpur Patel Kelavani Mandal's DHULE Institute of Technology

- M7,M8 and M9 mix can give good compressive and flexural strength.
- By using 0.75% of human hair as a fiber can give good flexural strength. Therefore by increasing the fiber content the specimen gives the good flexural strength.
- As we increase percentage of fine aggregate it can improve compressive strength.

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Shri Vile Parle Kelavani Mandal's

Institute of Technology, Dhule

Department of Civil Engineering

Project Based Learning Activity Report

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Shri Vile Parle Kelavani Mandal's DHULE Institute of Technology

Activity No-02

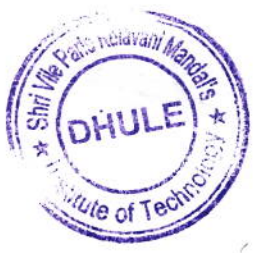
A Comprehensive Study of Green Roof Performance and its Suitability in Indian Climatic Condition

The goal of these case study is to provide detail journey of this project from second year to the final year and to know the achievements of the team during development. With the help of following points we will know the details of the developments of this project.

1. **Project Title:** A Comprehensive Study of Green Roof Performance and its Suitability in Indian Climatic Condition
2. **Faculty Mentor: Prof. Satish Taji**
3. **Students Involve in PBL:**
    - Patil Divya Pravin (1954491191018)
    - Jadhav Isha Prasad (1954491191060)
    - Patil Sayali Pramod (1954491191045)
    - Nashikkar Jayash Manoj (1954491191058)
    - Patil Prathamesh Rajendra (1954491191055)
    - Patil Pallavi Vilas (21544920181119111003)
4. **Start/ End Year:**
    - Start Year – **Sept 2019**
    - End Year – **June 2022**

5. **Work in Second Year (Academic Year 2019-2020): -**

- In the semester –III/IV, Department was conducted a session regarding innovative project development under the **Project Based Learning**.
- During this session all faculties of Civil engineering shared their ideas and problem statements. After discussion following areas of interest were selected:
    - Sustainable materials
    - Disaster management
    - Design of Water supply scheme
- Students groups were formed and asked to start with literature review to have better understanding of the area. Deadline to Complete this activity was March 2019.
- Prof. Darshan Patel was appointed faculty mentor based on the area selected by students.
- Following Students form a group for PBL in second year.
    - Patil Divya Pravin
    - Jadhav Isha Prasad
    - Patil Sayali Pramod



- Nashikkar Jayash Manoj
- Patil Prathamesh Rajendra
- Patil Pallavi Vilas

- Students discussed problems with conventional materials, their properties based on literature and tried to come up with possible sustainable materials.
- Students were suggested to visit lab and learn various tests on construction materials.

6. Work in Third Year (Academic Year 2020-2021): -

- As per discussion held in previous semester team prepared a detailed literature review report and came to conclusion that the proposed new model of green roof with water resisting plants and light weight soil substrate for composite climate.
- Next Students investigated the suitability of local plants for green roofs.
- selection and preparation of light weight moisture holding soil substrate for green roof
- Various properties of different types of materials studied.
- The basic soil tests applied

7. Work in Fourth Year (Academic Year 2021-2022): -

- Prof. Satish Ganesh Taji was appointed faculty mentor
- The team developed the model and test results were promising.
- The team published a Conference Paper Entitled "Selection of vegetation and soil media for Green roof under local Climatic conditions" International Conference of Research and Development in Civil Engineering RDCE'21
- The team participated in the District Level Project Competition which was associated with Directorate of Technical Education (DTE) and was the winner.

Abstract of the project of project-

As the 21st century is heading towards the future, heavily reliant on technology, smart systems and cities turning into mega-urbanized structures, the environmental issues and sustainable development remain firmly on the top of our evolutional concerns as a civilization. Green infrastructure has become an inevitable element of urbanization as it provides a valuable mitigation tool for the adverse impact of climate change and continues positively to the quality of the urban areas. The environmental, social and visual contributions that the green roofs can make towards sustainable living in high-density cities are widely acknowledged worldwide. Green roof is one of the best answers to the global climate change problems in urban areas with the possibility to reduced urban heat island. It can reduce the temperature maximum and daily variance of temperatures, which has the positive effect on the durability of the waterproof membrane. Green roof is one such sustainable approach, use of which helps us in

Shirpur Patto Kelavani Mandal's Institute of Technology DHULE

insulating the buildings and thereby contributing to better energy efficient performance of the building. Green roofs also provide habitat to different species, reduce rainwater runoff and better manage the carbon-dioxide cycle. Despite these benefits green roofs are not as common as it is in the European and American cities. In this project report an effort has been made to sensitize about the use and advantages of the "Green Roof" technology in India. The project study focuses on the soil and plants which are relevant and can sustain in the Indian climatic conditions.

Conclusion of Project

- Green roof mainly consists of 6 components that are vegetation layer, growing media (soil substrate), filter layer, drainage layer, root barrier, waterproofing membrane. Each layer has its own functions, starting from the top layer the vegetation layer constituents plants which helps to enhance water quality improve evapotranspiration process and provide thermal insulation against urban heat. The next layer, storage layer (also term as a growing media) is also for the classification of the green roof. Filter layer prevents small soil particles from filling the drainage layer. Drainage layer is used to drain of excess amount of water. Root barrier prevents penetration of roots. Waterproofing membrane prevents water leaks or damage.
- Sedum, succulent plants, native plants, local plants like aloevera can be suitable for the implementation of green roof in the composite climatic condition such as India. We selected some plants like portulaca grandiflora , moss rose, nilgiri grass and aloevera because they are suitable in all weather conditions, they require less maintenance, also they are locally available , rapid multiplication is also possible , also they gives horizontal coverage .
- Structural stability is the major issue while implementing the green roof in practical or real world, that's why we prepare the lightweight soil by adding the vermicompost, perlite, alluvial soil, vermiculite and coco peat. These materials are light in weight, porous; they are good for the growth for the plants. Also they are locally available and reach in minerals. It can be favorable for the green roof implementation.
- Green roof can perform well in urban conditions. It can reduce the heat island effect by covering conventional dark roofing surfaces with vegetation which absorb less heat, but they also use solar radiation to evaporate water from the growing media.

Shri Vile Parle Kelavani Mandal's DHULE Institute of Technology

Shri Vile Parle Kelavani Mandal's

Institute of Technology, Dhule

Department of Civil Engineering

Project Based Learning Activity Report

Objective:

The objective is to empower students with the ability to apply their technical acumen, cultivate practical knowledge and skills, actively engage in collaborative teamwork, develop a deep understanding of societal challenges, and formulate innovative solutions to real-world problems in the field of civil engineering.

Methodology Used:

- **Students are informed about important aspects and benefits of Project Base Learning.**
- **Form project groups for interested students.**
- **Assign faculty mentor to project group.**
- **Try to understand various real problems in different Civil Engineering domains and start analysis on them.**
- **Discuss various problems and start finding the solutions on problem.**
- **Take weekly review by mentor**
- **Present current work to the department faculties in every semester.**
- **Promote project work at different technical platforms like project competitions/conferences/journals.**

Shri Vile Parle Kelavani Mandal's ★ DHULE ★ Institute of Technology

Activity No-02

Eco Blocks

The goal of these case study is to provide detail journey of this project from second year to the final year and to know the achievements of the team during development. With the help of following points we will know the details of the developments of this project.

1. **Project Title: *Eco Blocks***
2. **Faculty Mentor: Prof. Deepak Singh Baghel**
3. **Students Involve in PBL:**
   - Abdul Rehaman Ansari
   - Chetan Jagtap
   - Ankit Deore
   - Rohit Rawate
   - Rohit Jade
4. **Start/ End Year:**
   - Start Year – **Sept 2020**
   - End Year – **June 2023**

5. **Work in Second Year (Academic Year 2020-2021): -**

- In the semester –III/IV, Department was conducted a session regarding innovative project development under the **Project Based Learning**.
- During this session all faculties of Civil engineering shared their ideas and problem statements. After discussion following areas of interest were selected:
  - Sustainable materials
  - Disaster management
  - Design of Water supply scheme
- Students groups were formed and asked to start with literature review to have better understanding of the area. Deadline to Complete this activity was March 2021.
- Dr. Shrikant Randhavane was appointed faculty mentor based on the area selected by students.
- Following Students form a group for PBL in second year.
  - Siddhesh Nashikkar
  - Abdul Rehaman Ansari
  - Chetan Jagtap
  - Ankit Deore
  - Rohit Rawate

- Rohit Jade

- Students discussed problems with conventional materials, their properties based on literature and tried to come up with possible sustainable materials.
- Students were suggested to visit lab and learn various tests on construction materials.

6. Work in Third Year (Academic Year 2021-2022): -

- Prof. Deepak Singh Baghel was appointed faculty mentor.
- As per discussion held in previous semester team prepared a detailed literature review report and came to conclusion that waste materials like plastic, tiles, glass etc. could be used to replace conventional materials.
- Next Students selected Plastic as material to blend with existing materials.
- Various properties of different types of plastic were studied.
- The basic tests applied are:
    - Look at the sample.
    - Feel the sample.
    - Cut the sample.
    - Burn some of the sample.
- Finally, the below two materials were identified
    - Granite dust:
        - Granite dust was collected from the local stone-crushing factory tiles shaping factory. It was dried at
        - the collection point and sieved through an IS: 4.75mm sieve a full sieve analysis was carried out.
    - Plastic Materials:
        - Plastic materials (PET, HDPE, and LDPE) were sourced from local vendors. They were washed and
        - then shredded into very small pieces by a grinder at the site where mold was about to be made but for
        - making paver block LDPE was used.
- The team also started to prepare Paver blocks and perform tests on it.

Shri Vile Parle Kelavani Mandal's DHULE Institute of Technology

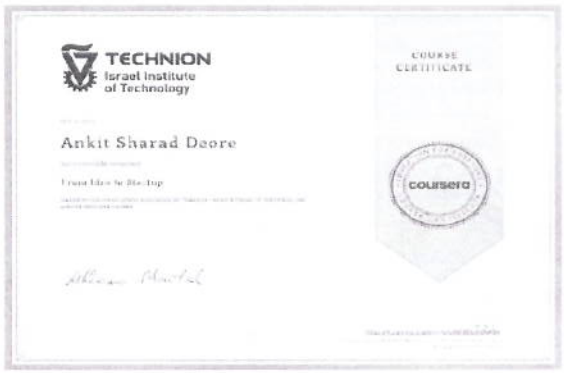
7. Work in Fourth Year (Academic Year 2022-2023): -

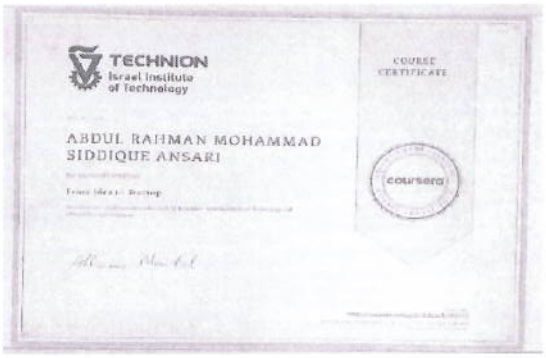
- The team developed the material and test results were promising. Hence, the team decided for Start-up.
- The team enrolled in the courser course " From Idea to Start-up"
- The also started to prepare for Avishkar 2022.
- The started to present their ideas on different platforms like start-up yatra, ideathon.
- The team submitted proposal to DBATU Start-up forum and the idea got selected for incubation .

Abstract of the project of project-

- Initially, the project was aimed at identifying eco-friendly and sustainable material that can be used to replace conventional material. After getting the material, the idea was converted into a start-up.
- This project enabled us to understand the overall startup ecosystem. In this Project tried to implement our own ideas by implementation and management. This project helped to understand which have learned about backend data collection only idea is not something which required data, facts, and market requirements are also important.
- The Startup which was started during this project was Eco Blocks i.e., the Utilization of waste plastic in the manufacturing of paver blocks in which the paver block was made of plastic waste which was LDPE type of plastic, and granite dust was also added to it further and various tests carried out carried and the result is mentioned in the report. The financial calculation is also given and shows the block's overall break-up cost.

Certificates:





Dr. Babasaheb Ambedkar Technological University, Lonere

AVISHKAR 2022

Certificate

This certificate is presented to

Rohit Jade

for participation in **Avishkar 2022** (Research Competition)
held at *SVKM's Institute of Technology, Dhule*
on 19th November 2022.

Participation level: **UG**

Discipline: **Engineering & Technology**

Prof. Mayuri Kulkarni	Prof. Dattatray Doifode	Dr. Nilesh Salunke
(Institute Coordinator)	(Institute Coordinator)	Principal SVKM IOT, Dhule

Dr. Babasaheb Ambedkar Technological University, Lonere

AVISHKAR 2022

Certificate

This certificate is presented to

Rohit Rawate

for participation in **Avishkar 2022** (Research Competition)
held at *SVKM's Institute of Technology, Dhule*
on 19th November 2022.

Participation level: **UG**

Discipline: **Engineering & Technology**

Prof. Mayuri Kulkarni	Prof. Dattatray Doifode	Dr. Nilesh Salunke
(Institute Coordinator)	(Institute Coordinator)	Principal SVKM IOT, Dhule

Shri Vile Parle Kelavani Mandal's Institute of Technology DHULE

Dr. Babasaheb Ambedkar Technological University, Lonere

AVISHKAR 2022

Certificate

This certificate is presented to

Chetan Jagtap

for participation in **Avishkar 2022** (Research Competition)
held at ***SVKM's Institute of Technology, Dhule***
on 19th November 2022.

Participation level: **UG**

Discipline: **Engineering & Technology**

Prof. Mayuri Kulkarni	Prof. Dattatray Doifode	Dr. Nilesh Salunke
(Institute Coordinator)	(Institute Coordinator)	Principal SVKM IOT, Dhule

Dr. Babasaheb Ambedkar Technological University, Lonere

AVISHKAR 2022

Certificate

This certificate is presented to

Ankit Deore

for participation in **Avishkar 2022** (Research Competition)
held at ***SVKM's Institute of Technology, Dhule***
on 19th November 2022.

Participation level: **UG**

Discipline: **Engineering & Technology**

Prof. Mayuri Kulkarni	Prof. Dattatray Doifode	Dr. Nilesh Salunke
(Institute Coordinator)	(Institute Coordinator)	Principal SVKM IOT, Dhule

Shri Vile Parle Kelavani Mandal's Institute of Technology DHULE

DTE CODE: 5449

SHRI VILE PARLE KELAVANI MANDAL'S

INSTITUTE OF TECHNOLOGY, DHULE

APPROVED BY AICTE, NEW DELHI, GOVT. OF MAHARASHTRA AND AFFILITED TO DBATU, LONERE

BEHIND GURUDWARA, MUMBAI AGRA HIGHWAY DHULE, 424001.

Congratulations!

for selection of

the start-up proposal titled

"Eco Blocks"

on June 26, 2023

by

Prof. Deepak Singh Baghel
Mentor

Mr. Abdul Rahman Ansari
B. Tech 2023

DBATU INCUBATION CENTRE

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Department of Civil Engineering

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Shri Vile Parle Kelavani Mandal's

Institute of Technology, Dhule

Department of Civil Engineering

Project Based Learning Activity Report

Objective:

The objective is to empower students with the ability to apply their technical acumen, cultivate practical knowledge and skills, actively engage in collaborative teamwork, develop a deep understanding of societal challenges, and formulate innovative solutions to real-world problems in the field of civil engineering.

Methodology Used:

- **Students are informed about important aspects and benefits of Project Base Learning.**
- **Form project groups for interested students.**
- **Assign faculty mentor to project group.**
- **Try to understand various real problems in different Civil Engineering domains and start analysis on them.**
- **Discuss various problems and start finding the solutions on problem.**
- **Take weekly review by mentor**
- **Present current work to the department faculties in every semester.**
- **Promote project work at different technical platforms like project competitions/conferences/journals.**

Shri Vile Parle Kelavani Mandal's ★ DHULE ★ Institute of Technology

Activity No-02

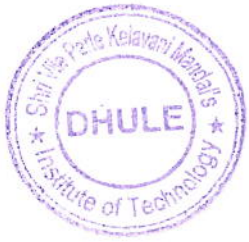
Eco Blocks

The goal of these case study is to provide detail journey of this project from second year to the final year and to know the achievements of the team during development. With the help of following points we will know the details of the developments of this project.

1. **Project Title:** ***Mechanized Renovators***
2. **Faculty Mentor: Prof. Deepak Singh Baghel**
3. **Students Involve in PBL:**
   - Siddhesh Nashikkar
   - Swapnil Marathe
   - Mayank Patil
   - Sayali Mehrunkar
4. **Start/ End Year:**
   - Start Year – **Sept 2021**
   - End Year – **June 2023**

5. **Work in Second Year (Academic Year 2021-2022): -**

- In the semester –III/IV, Department was conducted a session regarding innovative project development under the **Project Based Learning**.
- During this session all faculties of Civil engineering shared their ideas and problem statements. After discussion following areas of interest were selected:
  - Educational sector,
  - Labor management,
  - innovative construction materials
- Students groups were formed and asked to start with literature review to have better understanding of the area. Deadline to Complete this activity was November 2021.
- Prof. Deepak Singh Baghel was appointed faculty mentor based on the area selected by students.
- Following Students form a group for PBL in second year.
  - Siddhesh Nashikkar
  - Swapnil Marathe
  - Mayank Patil
  - Sayali Mehrunkar



- Students discussed different problems related to construction labour sector based on literature and tried to come up with possible solutions.
- Students were suggested to do the field survey and get on-field situation of the problem.

6. Work in Third Year (Academic Year 2022-2023): -

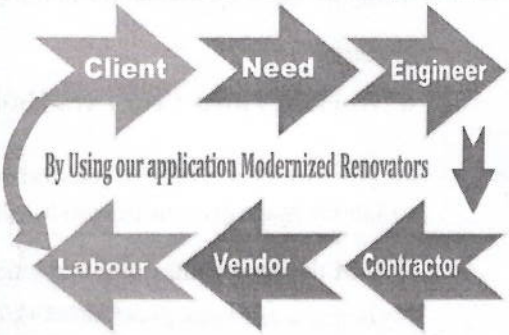
- As per discussion held in previous semester team focused on the major problems leading to labour management in construction sector..
- One of the important thing that came in mind that these problems would need IT tools and a network good network of labours.
- Managing labours will be done using app.
- Contractor, vendor, engineer and labours will be our stakeholders.
- In the month of October 2022 team finalize the methodology and started working on the development of app.
- The team also started to prepare SOPs for awaring labours to work with technology.
- In the month of November team registered for Avishkar-2022, an State level competition.
- The team initially presented idea at Institute level and qualified by Jury for Zonal Level.
- Next, the team secured second position at Zonal Level and qualified fir University level which was held on December, 2022.

MODERNIZED RENOVATORS

Digital management of Costruction services

What is Modernized Renovators?

- Digital management of Civil engineering workers.
- This medium will manage drawbacks of unsophisticated Workers properly.
- Modernized Renovators gives huge platform to Construction workers. e.g. Plumber, Electrician, Mason, Painter, Carpenter, etc.



- Workers connected to Er. or Contractor
- Workers not connected to Er. or Contractor

Dhule Taluka Map

Showing daily migration of workers

Why Modernized Renovators?

I) To improve employment of skilled and unskilled workers.
ii) Construction services will easily available to clients at door step.
iii) To break the highly commercial chain between workers and clients to make ease to both.

Our Progress:

1) Yukti Portal registered concept.
2) Applied for trademark and logo idea petant registration under IPR.
3) Representative app has been developed by us.

Revenue Generation

- Client Service Charges
- Worker Membership Fees
- Google Advertisements
- Local Entrepreneur Marketing

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Certificates:

Dr. Babasaheb Ambedkar Technological University, Lonere
State Technical University, Maharashtra Act No. XXIX of 2014

AVISHKAR 2022

Certificate of Excellence

This certificate is proudly presented to

Mr/ Miss. Siddesh Nashikkar

of SVKM's Institute of Technology, Dhule

for securing ~~first~~/ second place in zonal level Avishkar 2022 held at

SSVPS Bapusaheb Shivajirao Deore College of Engineering

on 10th December 2022.

Category: UG/ ~~PG/ PPG/ Teachers~~

Descipline: CML

Dr. Rajkumar Sirsam
Observer

Prof. Sangeeta Rajput
Coordinator

Prof. Vinod Shinde
Coordinator

Dr. Babasaheb Ambedkar Technological University, Lonere

AVISHKAR 2022

Certificate

This certificate is presented to

Mayank Patil

for participation in **Avishkar 2022** (Research Competition)
held at *SVKM's Institute of Technology, Dhule*
on 19th November 2022.

Participation level: **UG**

Discipline: **commerce ,Management,Law**

Prof. Mayuri Kulkarni
(Institute Coordinator)

Prof. Dattatray Doifode
(Institute Coordinator)

Dr. Nilesh Salunke
Principal
SVKM IOT, Dhule

Shri Vile Parle Kelavani Mandal's Institute of Technology DHULE

Dr. Babasaheb Ambedkar Technological University, Lonere

AVISHKAR 2022

Certificate

This certificate is presented to

Sayali Mehrunkar

for participation in **Avishkar 2022** (Research Competition)
held at ***SVKM's Institute of Technology, Dhule***
on 19th November 2022.

Participation level: **UG**

Discipline: **commerce ,Management,Law**

Prof. Mayuri Kulkarni	Prof. Dattatray Doifode	Dr. Nilesh Salunke
(Institute Coordinator)	(Institute Coordinator)	Principal SVKM IOT, Dhule

Dr. Babasaheb Ambedkar Technological University, Lonere

AVISHKAR 2022

Certificate

This certificate is presented to

Siddesh Nashikar

for participation in **Avishkar 2022** (Research Competition)
held at ***SVKM's Institute of Technology, Dhule***
on 19th November 2022.

Participation level: **UG**

Discipline: **commerce ,Management,Law**

Prof. Mayuri Kulkarni	Prof. Dattatray Doifode	Dr. Nilesh Salunke
(Institute Coordinator)	(Institute Coordinator)	Principal SVKM IOT, Dhule

Shri Vile Parle Kelavani Mandal's DHULE Institute of Technology

Dr. Babasaheb Ambedkar Technological University, Lonere

AVISHKAR 2022

Certificate

This certificate is presented to

Swapnil Marathe

for participation in **Avishkar 2022** (Research Competition)
held at ***SVKM's Institute of Technology, Dhule***
on 19th November 2022.

Participation level: **UG**

Discipline: **commerce ,Management,Law**

Prof. Mayuri Kulkarni	Prof. Dattatray Doifode	Dr. Nilesh Salunke
(Institute Coordinator)	(Institute Coordinator)	Principal SVKM IOT, Dhule

Shri Vile Parle Kelavani Mandal's
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Institute of Technology

DTE Code: 5449

Shri Vile Parle Kelavani Mandal's

INSTITUTE OF TECHNOLOGY, DHULE

Approved by AICTE, New Delhi, Govt. of Maharashtra and Affiliated to DBATU, Lonere

Behind Gurudwara, Mumbai-Agra Highway,Dhule 424001.

7. Work in Final Year (Academic Year 2023-2024): -

- Now team is in final year. It is working on the app improvements.
- Team has also planned for filling patent.
- **Abstract of the project of project-**

****Modernized Renovators: Revolutionizing Labor Management Through an Innovative App****

In today's fast-paced world, where technology is reshaping our daily lives, it's no surprise that even the most traditional industries are embracing digital transformation. The construction and household repair sector, often seen as a labor-intensive industry, is undergoing a significant shift towards modernization. One notable advancement in this realm is the introduction of the "Modernized Renovators" app, a groundbreaking platform that efficiently manages labor in the construction and household repair sectors.

****The Modernized Renovators App: Bridging the Gap****

The Modernized Renovators app serves as a bridge between clients seeking household repair and

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construction services and skilled laborers eager to provide their expertise. This innovative platform caters to both clients and laborers, streamlining the process of connecting demand with supply in this dynamic industry.

****For Clients: Easy Access to Quality Services****

For clients in need of household repair, renovation, or construction assistance, the Modernized Renovators app simplifies the entire process. Clients can effortlessly submit service requests through the app, specifying their requirements - whether it's carpentry, repair, construction, or plumbing. Gone are the days of searching endlessly for skilled professionals; with just a few taps on their smartphones, clients can access a network of qualified laborers.

****For Laborers: A Gateway to Sustainable Employment****

On the flip side, laborers in the construction and repair sectors can benefit tremendously from the Modernized Renovators app. It provides them with a platform to find job opportunities that match their skill sets and availability. This not only ensures a steady flow of employment but also empowers laborers by giving them more control over their work schedule.

****Fostering Sustainable Job Opportunities****

One of the standout features of the Modernized Renovators app is its commitment to fostering sustainable job opportunities. By connecting clients with skilled laborers, the app plays a crucial role in reducing underemployment in the construction and household repair sectors. It ensures that laborers are consistently engaged in meaningful work, promoting financial stability and enhancing their quality of life.

****Quality Work and Skilled Labor****

The Modernized Renovators app goes beyond simply connecting clients with laborers. It places a strong emphasis on the quality of work delivered. Skilled laborers registered on the platform are vetted for their expertise and experience. This ensures that clients receive services of the highest quality, resulting in improved customer satisfaction.

****A Sustainable Business Model****

To sustain and enhance the services provided by the Modernized Renovators app, a nominal token commission is charged. This commission is levied on both contractors and clients, ensuring that the platform remains financially viable while delivering value to all parties involved.

****The Way Forward: Modernizing Labor Management****

The Modernized Renovators app represents a significant step towards modernizing labor management in the construction and household repair sectors. By leveraging the power of technology, it not only simplifies the process for clients but also empowers laborers with sustainable job opportunities. This innovative platform is poised to transform an industry known for its traditional practices into one that embraces efficiency, quality, and sustainability.

In conclusion, the Modernized Renovators app stands as a beacon of progress in the construction and household repair sectors. It offers a win-win solution, where clients can access skilled labor

Shri Vile Parle Kelavani Mandal's DHULE College of Technology

easily, laborers can find consistent employment, and quality workmanship is prioritized. With its commitment to sustainability and modernization, this app is shaping the future of labor management in these vital industries

Shri Vile Parle Kelavani Mandal's

Institute of Technology, Dhule

Department of Electrical Engineering

Project Based Learning Activity Report

Objective:

Students are able to apply their technical knowledge, acquire practical skills in making electrical connections, Arduino programming, get involved into team processes and understand real problems of society and try to provide solution by applying electrical engineering and technical approaches.

Methodology Used:

- Students are informed about important aspects and benefits of Project Base Learning.
- Formed project groups of interested students.
- Assigned faculty mentor to each project group.
- Instructed students to understand real life problems in different domains and start analyzing the problems.
- Encouraged students to find technical solutions to the problems found.
- Taken weekly review by mentor.
- Let the students present their work in front of department faculties after end of every semester.
- Promoted project work at different technical platforms like project competitions, conferences, journals etc.

Shri Vile Parle Kelavani Mandal's ★ DHULE ★ Institute of Technology

H.O.D. Electrical Dept.
SVKM's Institute of Technology, Dhule

Activity No 1

1. **Project Title:** Security Management System, Intituitive Fertilizers and Pesticides Recommendation Portal, Wind Turbine Predictive Maintenance using Machine Learning
2. **Faculty Mentor:** Prof. Shahid Akhtar
3. **Students Involve in PBL:**
   - Mr. Faizan Javeed Shaikh
   - Ms. Pratiksha Dinesh Lohar
   - Mr. Mayur Dinesh Mali
   - Mr. Rohit Pandurang Deore
4. **Start/ End Year:**
   - Start Date: Sep 2021
   - End Date: Jun 2024
5. **Work in Second Year (Academic Year 2021-2022):**
   - In the third semester, Department conducted one motivational session regarding innovative project development under the Project Base Learning.
   - During that session all faculties of electrical engineering shared their ideas regarding real life problem statements. During this discussion faculty members aggreed that student are interested to work with IOT in Agriculture and Automation sector.
   - Dr. Vishal Moyal, Coordinator of Electrical Department appointed Prof. Shahid Akhtar as faculty mentor for PBL.
   - Students mentioned above discussed different problem statements in agriculture and home automation domain with the mentor.
   - Mentor suggested the students to start working on developing a Home Automation system.
   - Students started the work with full enthusiasm and completed the project within 2 months.
   - The project was presented in District level Project Competition 2022 on 11th March 2022, where the group won at college level.
   - Same project was also presented in Smart India Hackathon 2022 (College Level) on 22nd March 2022.

Certificates:

Shri Vile Parle Kelavani Mandal's

INSTITUTE OF TECHNOLOGY, DHULE

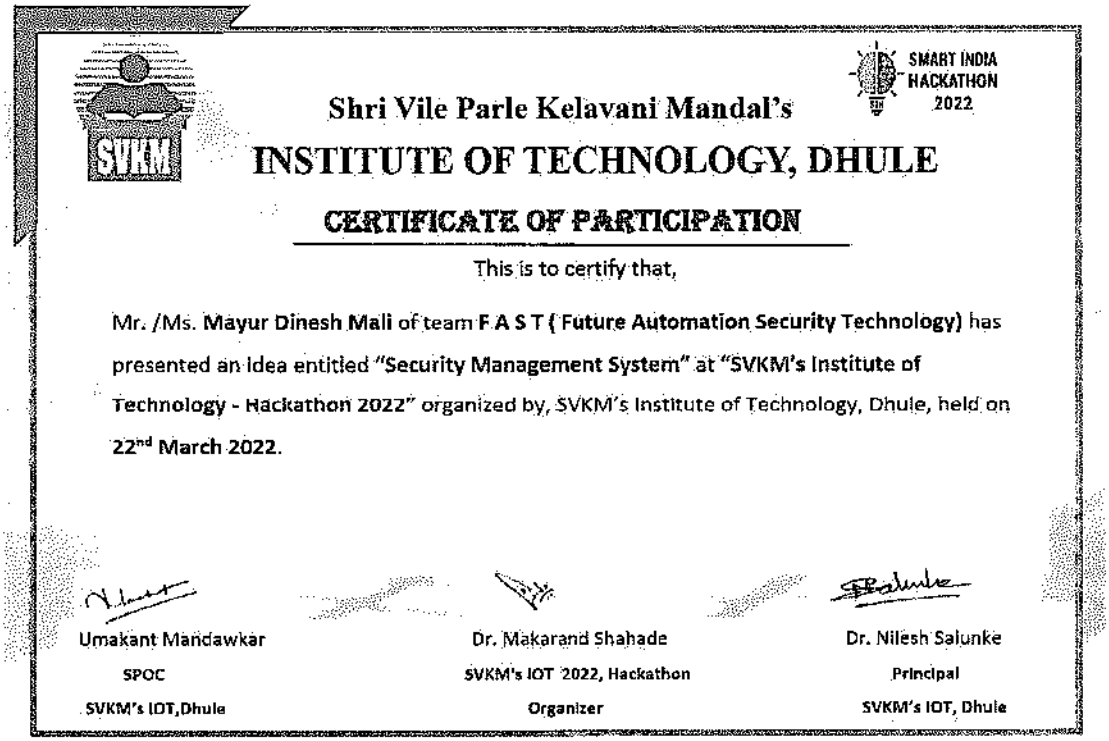
SMART INDIA HACKATHON 2022

CERTIFICATE OF PARTICIPATION

This is to certify that,

Mr. /Ms. **Faizan Javed Shaikh** of team **F A S T (Future Automation Security Technology)** has presented an idea entitled **"Security Management System"** at **"SVKM's Institute of Technology - Hackathon 2022"** organized by, SVKM's Institute of Technology, Dhule, held on **22nd March 2022.**

Umakant Mandawkar	Dr. Makarand Shahade	Dr. Nilesh Salunke
SPOC	SVKM's IOT 2022, Hackathon	Principal
SVKM's IOT,Dhule	Organizer	SVKM's IOT, Dhule



Shri Vile Parle Kelavani Mandal's

INSTITUTE OF TECHNOLOGY, DHULE

SMART INDIA HACKATHON 2022

CERTIFICATE OF PARTICIPATION

This is to certify that,

Mr. /Ms. **Mayur Dinesh Mali** of team **F A S T (Future Automation Security Technology)** has presented an idea entitled **"Security Management System"** at **"SVKM's Institute of Technology - Hackathon 2022"** organized by, SVKM's Institute of Technology, Dhule, held on **22nd March 2022.**

Umakant Mandawkar	Dr. Makarand Shahade	Dr. Nilesh Salunke
SPOC	SVKM's IOT 2022, Hackathon	Principal
SVKM's IOT,Dhule	Organizer	SVKM's IOT, Dhule

SMART INDIA HACKATHON 2022

Shri Vile Parle Kelavani Mandal's

INSTITUTE OF TECHNOLOGY, DHULE

CERTIFICATE OF PARTICIPATION

This is to certify that,

Mr. /Ms. **Rohit Pandurang Deore** of team **F A S T (Future Automation Security Technology)** has presented an idea entitled **"Security Management System"** at **"SVKM's Institute of Technology - Hackathon 2022"** organized by, SVKM's Institute of Technology, Dhule, held on **22nd March 2022.**

Umakant Mandawkar	Dr. Makarand Shahade	Dr. Nilesh Salunke
SPOC	SVKM's IOT 2022, Hackathon	Principal
SVKM's IOT,Dhule	Organizer	SVKM's IOT, Dhule

SMART INDIA HACKATHON 2022

Shri Vile Parle Kelavani Mandal's

INSTITUTE OF TECHNOLOGY, DHULE

CERTIFICATE OF PARTICIPATION

This is to certify that,

Mr. /Ms. **Pratiksha Dinesh Lohar** of team **F A S T (Future Automation Security Technology)** has presented an idea entitled **"Security Management System"** at **"SVKM's Institute of Technology - Hackathon 2022"** organized by, SVKM's Institute of Technology, Dhule, held on **22nd March 2022.**

Umakant Mandawkar	Dr. Makarand Shahade	Dr. Nilesh Salunke
SPOC	SVKM's IOT 2022, Hackathon	Principal
SVKM's IOT,Dhule	Organizer	SVKM's IOT, Dhule

Dr. Babasaheb Ambedkar Technological University, Lonere

AVISHKAR 2022

Certificate

This certificate is presented to

Pratiksha D. Lohar

for Winner in Department level Avishkar 2022 (Research Competition)
held at *SVKM's Institute of Technology, Dhule*
on 19th November 2022.

Participation level: UG

Discipline: Agriculture & Animal Husbandry

Prof. Mayuri Kulkarni	Prof. Dattatray Doifode	Dr. Nilesh Salunke
(Institute Coordinator)	(Institute Coordinator)	Principal SVKM IOT, Dhule

---

DISTRICT LEVEL
PROJECT COMPETITION

CERTIFICATE

This Certificate is presented to

Shaikh Faizan Javid

From SVKM's Institute of Technology, Dhule

for Winner/~~Runner-up/Second Runner-up/Participation~~
in "District Level Project Competition"
In Association with DTE, Regional Office Nashik & Shikshan Maharshi Dadasaheb Rawal, Government Polytechnic, Dhule On 11th March 2022,
Organized by Shri Vile Parle Kelavani Mandal's Institute of Technology, Dhule.

Dr. Hitesh Thakare	Dr. P.G. Gadhari	Dr. R.G. Wadekar	Dr. Nilesh Salunke
Coordinator SVKM's Institute of Technology, Dhule	HOD, Mechanical Engg S.M.D.R. Government Polytechnic, Dhule	Principal S.M.D.R. Government Polytechnic, Dhule	Principal SVKM's Institute of Technology, Dhule

स्वातंत्र्याचा अमृत महोत्सव

DISTRICT LEVEL
PROJECT COMPETITION

CERTIFICATE

This Certificate is presented to

Mali Mayur Dinesh

From SVKM's Institute of Technology, Dhule

for Winner/~~Runner-up/Second Runner-up/Participation~~

In "District Level Project Competition"

In Association with DTE, Regional Office Nashik & Shikshan Maharshi Dadasaheb Rawal, Government Polytechnic, Dhule On 11th March 2022,

Organized by Shri Vile Parle Kelavani Mandal's Institute of Technology, Dhule.

Dr. Hitesh Thakare	Dr. P.G. Gadhari	Dr. R.G. Wadekar	Dr. Nilesh Salunke
Coordinator	HOD, Mechanical Engg.	Principal	Principal
SVKM's Institute of Technology, Dhule	S.M.D.R. Government Polytechnic, Dhule	S.M.D.R. Government Polytechnic, Dhule	SVKM's Institute of Technology, Dhule

स्वातंत्र्याचा अमृत महोत्सव

DISTRICT LEVEL
PROJECT COMPETITION

CERTIFICATE

This Certificate is presented to

Lohar Pratiksha Dinesh

From SVKM's Institute of Technology, Dhule

for Winner/~~Runner-up/Second Runner-up/Participation~~

In "District Level Project Competition"

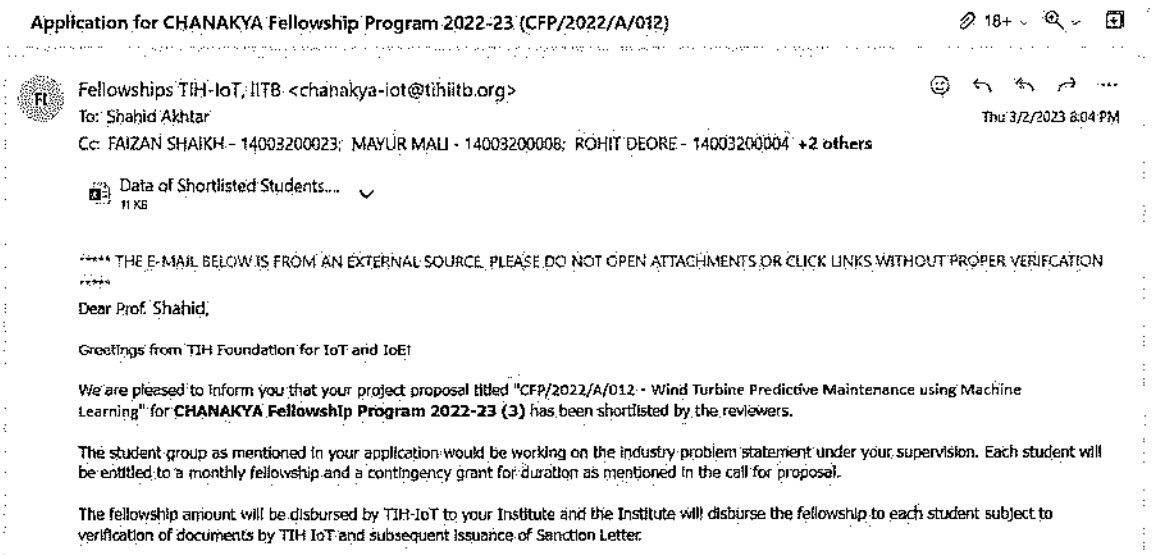
In Association with DTE, Regional Office Nashik & Shikshan Maharshi Dadasaheb Rawal, Government Polytechnic, Dhule On 11th March 2022,

Organized by Shri Vile Parle Kelavani Mandal's Institute of Technology, Dhule.

Dr. Hitesh Thakare	Dr. P.G. Gadhari	Dr. R.G. Wadekar	Dr. Nilesh Salunke
Coordinator	HOD, Mechanical Engg.	Principal	Principal
SVKM's Institute of Technology, Dhule	S.M.D.R. Government Polytechnic, Dhule	S.M.D.R. Government Polytechnic, Dhule	SVKM's Institute of Technology, Dhule

6. **Work in Third Year (Academic Year 2022-2023):**
   - As per discussion held in previous year, student team focused on issues of Agriculture sector.
   - Initially, students did a survey regarding application of pest controllers and fertilizers.
   - They concluded that due to lack awareness, most of the farmers are using inadequate pesticides and fertilizers for their crops.
   - Since Avishkar Competition was being held in the institute, the team presented their idea to develop a Machine Learning based Pesticide and Fertilizer Recommending.
   - Unfortunately, there idea was not convincing to the event judges.
   - Thereafter, IIT Bombay's CHANAKYA Fellowship Program invited proposals for IoT and Industrial problem statements.
   - Project time quickly performed a literature survey on predictive maintenance and submitted a proposal for "Wind Turbine Predictive Maintenance using Machine Learning".
   - Their proposal got shortlisted and they received a project funding of total 4,80,000/-.
   - They started working on the project since 27th March 2023.

Project Proposal shortlisted email:



Application for CHANAKYA Fellowship Program 2022-23 (CFP/2022/A/012)

Fellowships TIH-IoT, IITB <chanakya-iot@tihiitb.org>
To: Shahid Akhtar
Cc: FAIZAN SHAIKH - 14003200023; MAYUR MALI - 14003200008; ROHIT DEORE - 14003200004 +2 others
Thu 3/2/2023 8:04 PM

Data of Shortlisted Students....
11 KB

***** THE E-MAIL BELOW IS FROM AN EXTERNAL SOURCE. PLEASE DO NOT OPEN ATTACHMENTS OR CLICK LINKS WITHOUT PROPER VERIFCATION *****

Dear Prof. Shahid,

Greetings from TIH Foundation for IoT and IoE!

We are pleased to inform you that your project proposal titled "CFP/2022/A/012 - Wind Turbine Predictive Maintenance using Machine Learning" for **CHANAKYA Fellowship Program 2022-23 (3)** has been shortlisted by the reviewers.

The student group as mentioned in your application would be working on the industry problem statement under your supervision. Each student will be entitled to a monthly fellowship and a contingency grant for duration as mentioned in the call for proposal.

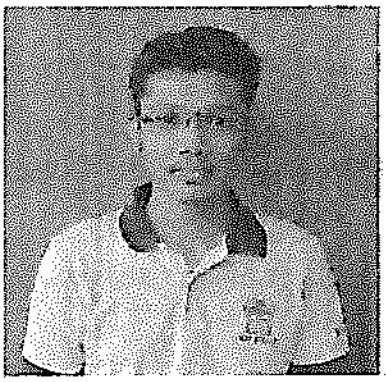
The fellowship amount will be disbursed by TIH-IoT to your Institute and the Institute will disburse the fellowship to each student subject to verification of documents by TIH IoT and subsequent issuance of Sanction Letter.

7. **Work in Final Year (Academic Year 2023-2024):**
   - As of August 2023, students have collected dataset of Bearings from NASA's dataset repository.

- Extracted time domain features of the dataset.
- Trained machine learning algorithms for classifying the fault types that occurred in the bearings.
- In the next month, they are going to present a research paper in an IEEE conference.

8. **Student Profiles:**

Name: Faizan Javid Shaikh



Date of Birth: 16/04/20023

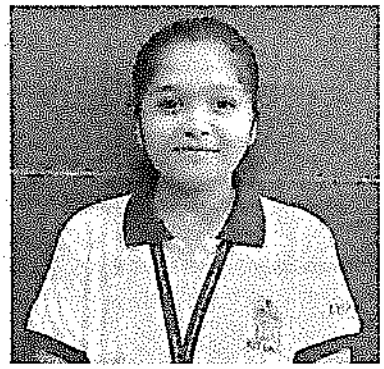
Gender: Male

Permenent Address: 10A, Vijay Police Colony, Wadibhokar Road, Deopur Dhule

Email: fjshaikh160@gmail.com

Contact No: 9075628271

Name: Pratiksha Dinesh Lohar



Date of Birth: 05/03/2002

Gender: Female

Permenent Address: 9, Chhorria Nagar, Behind Mahavir Housing Society, Dhule

Email: pratikshavd66@gmail.com

Contact No: 8767854540

Name: Mayur Dinesh Mali

Date of Birth: 16/12/2000

Gender: Male

Permenent Address: 85B, Vighna Harta Colony, Deopur, Dhule

Email: mayurmali1612@gmail.com

Contact No: 7249230705

Name: Rohit Pandurang Deore

Date of Birth: 10/9/2002

Gender: Male

Permenent Address: 58, Bhagwati Colony , At post Kusumba, Dhule

Email: rohitdeore6905@gmail.com

Contact No: 8766803468

Shri Vile Parle Kelavani Mandal's Institute of Technology DHULE

H.O.D. Electrical Dept.
SVKM's Institute of Technology,Dhule

SHRI VILE PARLE KELAVANI MANDAL'S

INSTITUTE OF TECHNOLOGY, DHULE

Department of Information Technology

Project Based Learning Activity Report

Objective:

Students are encouraged to participate in workshop, internships and competitions to gain and improve their programming skills, get involved into team processes and understand real problem of society and try to provide solution by applying software engineering approaches.

Methodology Used:

- Encourage students to improve programming skills by participating workshop or internships.
- Encourage students to join online courses on various technical skills
- Try to understand various real problems in different domains and start analysis on them.
- Discuss various problems and start finding the solutions on problem.
- Present current work in front of department faculties after end of every semester.
- Promote project work at different technical platforms like project competitions, conferences or journals.

In this project-based learning report, we delve into the educational journeys of two students, Vivek Khairnar and Mustafa Quresh Saifee, who embarked on their direct second year B. Tech Information Technology program in the academic year 2018-19.

This report will explore the academic paths of Vivek and Mustafa, shedding light on their achievements and challenges while showcasing their tenacity and passion for learning. Through their experiences, we aim to gain insights into the world of project-based learning and the growth these students have achieved throughout their journey.

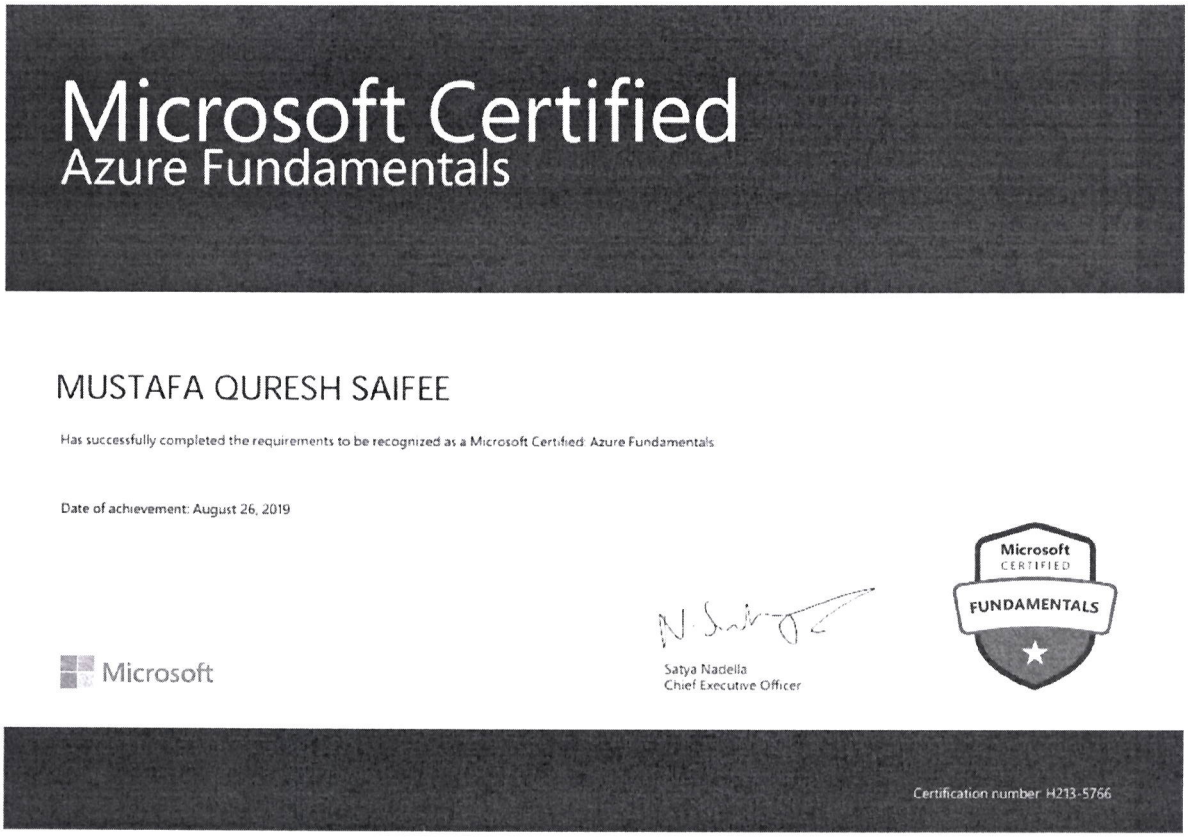
Academic Year 2018-19

During the academic year 2018-19, on the 2nd of March 2019, the Department of IT and Computer Engineering orchestrated a C Coder competition centered around the C programming language. This competition was structured into two distinct phases: a quiz in the initial phase and programming challenges in the subsequent phase. Although Vivek and Mustafa did not secure top ranks in this competition, their performance was noteworthy. They demonstrated exceptional skills and determination, giving the top-ranking participants a run for their money.

Academic Year 2019-20

1. Mustafa Saifee completed Microsoft Certified Azure Fundamentals

Prof. Khalid Alfatmi inspires and motivate Mustafa for course of Microsoft Certified Azure Fundamentals. Azure is a public cloud computing platform that offers Infrastructure as a Service (IaaS), Software as a Service (SaaS) and Platform as a Service (PaaS), solutions for analytics, virtual computing, storage, networking, and other services. Azure helps organizations to design, deploy, and manage apps more rapidly and easily without acquiring and maintaining the underlying information technology components. It's recommended to have skills and experience working with an area of IT, such as infrastructure management, database management, or software development. Mustafa completed achieved his certificate on 26 August 2019 acquiring necessary offered by certification. After completion of this certification, Mustafa himself conducted two training session for institute student during his third year academics.



2. Mustafa Saifee conducted one day workshop on "The Deployment and Hosting of website using Microsoft Azure and Github' on 1st Jan 2020.

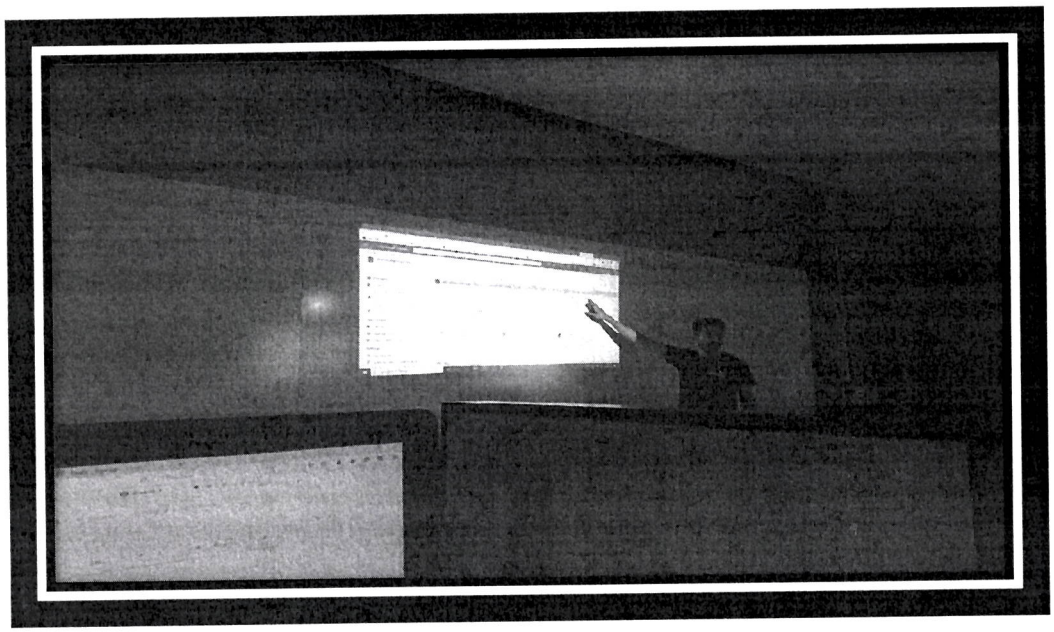
The Microsoft Students Club of information technology department organized a one day technical workshop in the field of cloud computing particularly on Microsoft Azure. Mr. Mustafa Saifee (TY B Tech[IT]) worked as resource person for this workshop. He is a Microsoft student partner since last 6 years and Gold Microsoft partner too.

The workshop started at 9:30 a.m. The agenda of the workshop was explained in the first half hour. The students were made aware about the facilities and benefits they will be receiving from Microsoft while attending this workshop. Cloud is one of the most expensive services in today's Information Technology field.

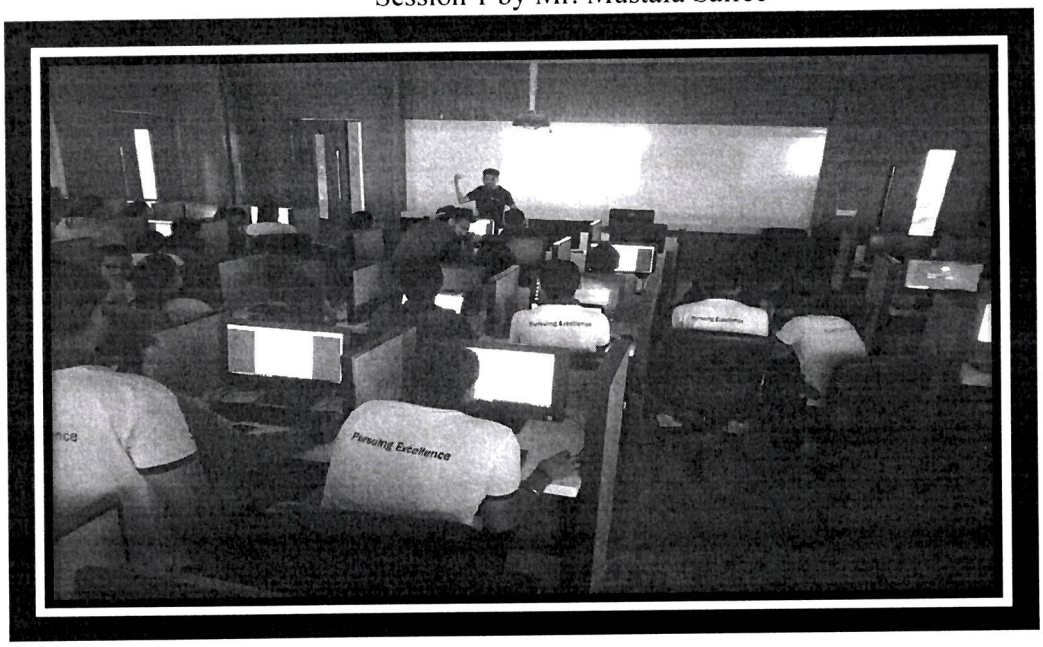
Mr. Mustafa Saifee arranged Microsoft licenses for access to the Microsoft Azure cloud these licenses facilitate infinite possibilities to apply one's knowledge and their projects on Cloud. Mr Mustafa Saifee being a gold Microsoft Student Partner had the privilege to bring these licenses free of cost for the student of SVKM's Institute of Technology. At the end of the

workshop the students prepared a resume that they will be needing for their final semester interview process. Resume was made using HTML and CSS and it was deployed on Azure and the code was hosted on GitHub. Now the students have a live link on which their resume is hosted to be seen by potential employers in the respective field. The workshop was a great success and the students enjoyed it.

Glimpses of the Event:



Session 1 by Mr. Mustafa Saifee

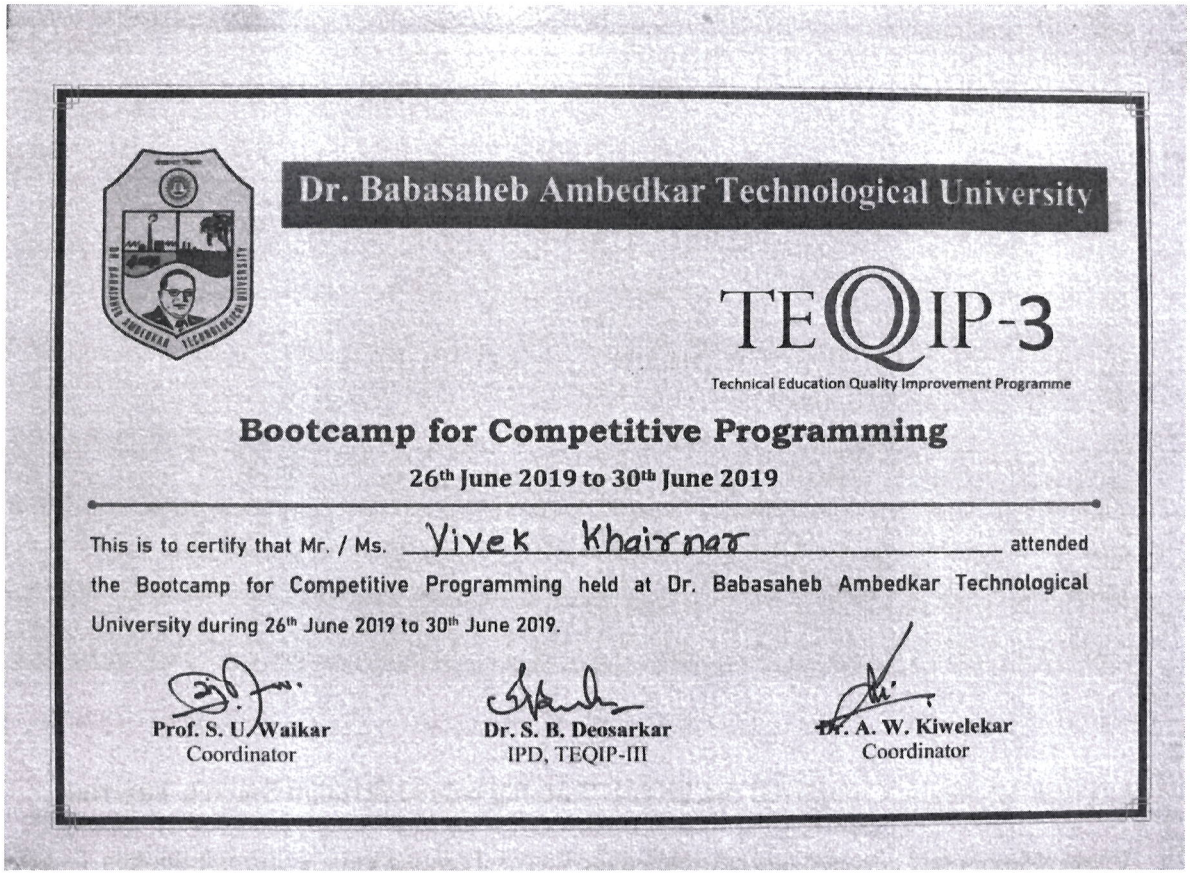


Session 2 by Mr. Mustafa Saifee

3. Vivek Khainar attended one week 'Bootcamp for Competitive Programming'.

In beginning of academic year, Vivek khairnar attended one week 'Bootcamp for Competitive Programming' organized by Dr. Babbasaheb Ambedkar Technological University under TEQIP-3 held during 26 June 2019 to 30 June 2019. Prof. Khalid Alfatmi had motivated students including Vivek to participate and take advantage of bootcapm.

The purpose of competitive programming was to cultivate these skills by solving increasingly difficult problems. The primary objective of bootcamp was to introduce the participants to the process of competitive programming and to provide the background knowledge of algorithms necessary to solve problems on the platforms hosting programming contests. The secondary aim of bootcamp was to prepare the participants for online programming contests and hackathons so that their performance in such events would improve.



Dr. Babasaheb Ambedkar Technological University

TEQIP-3

Technical Education Quality Improvement Programme

Bootcamp for Competitive Programming

26th June 2019 to 30th June 2019

This is to certify that Mr. / Ms. Vivek Khairnar attended the Bootcamp for Competitive Programming held at Dr. Babasaheb Ambedkar Technological University during 26th June 2019 to 30th June 2019.

Prof. S. U. Waikar
Coordinator

Dr. S. B. Deosarkar
IPD, TEQIP-III

Dr. A. W. Kiwelekar
Coordinator

4. Vivek Khainar awarded certificate of consolation in National Level Coding competition in Kack-a-Thon 3.0

Vivek Khainar was awarded certificate of consolation in National Level Coding competition in Kack-a-Thon 3.0 held at Shri Shankaracharya Technical Campus, Chhattisgarh Swami Vivekananda Technical University, Bhilai on 26, 27 Feb 2020 under TEQIP-III.

5. Vivek Khairnar Completed the LaTex Training course through Spoken Tutorial

Vivek Khainar had enrolled and completed the LaTex Training course through Spoken Tutorial in online mode. LaTeX is a typesetting system used for creating documents with a professional look. It is commonly used for writing documents in the fields of science, mathematics, engineering, and economics. LaTeX is based on the TeX typesetting system, but with additional features and more user-friendly syntax.

This LaTex Training course was organized at SVKM's IOT, Dhule by Prof. Mayuri Kulkarni. Course was offered to class for create awareness and specify importance of creating good technical documentation like project report, research papers.

Addition to this Vivek had completed spoken tutorial course on C training and Java training on 27 Jan 2020 and 20 April 2020 organized at SVKM's IOT, Dhule by Prof. Mayuri Kulkarni.

Spoken Tutorial

Certificate for Completion of LaTeX Training

This is to certify that **VIVEK KHAINAR** has successfully completed **LaTeX** test organized at **SVKM's Institute of Technology by Mayuri Kulkarni** with course material provided by the Spoken Tutorial Project, IIT Bombay.

Passing an online exam, conducted remotely from IIT Bombay, is a pre-requisite for completing this training. **Nilesh Pawar** at **SVKM's Institute of Technology** invigilated this examination. This training is offered by the **Spoken Tutorial Project, IIT Bombay, funded by National Mission on Education through ICT, MHRD, Govt., of India.**

December 8th 2019

Prof. Kannan M Moudgalya
IIT Bombay

2195974WKO

6. Vivek Khairnar completed the Sixteen day training of Basic Python

Vivek Khairnar completed the Sixteen day training of Basic Python held between 26 Dec 2019 to 10 Jan 2020. Training program is organized by Unique System Skills, Pune India.

Python is a high-level, interpreted, interactive, and object-oriented scripting language. Python was designed to be highly readable which uses English keywords frequently whereas other languages use punctuation and it has fewer syntactical constructions than other languages.

CERTIFICATE *OF* ACHIEVEMENT

THIS ACKNOWLEDGES THAT

Vivek Arvind khairnar

HAS SUCCESSFULLY COMPLETED THE

TRAINING OF Basic Python

(From 26th Dec 2019 to 10th Jan 2020)

Jan 10th 2020

Authorized Signatory,
Unique System Skills, Pune,
India

UNIQUE System Skills LLC

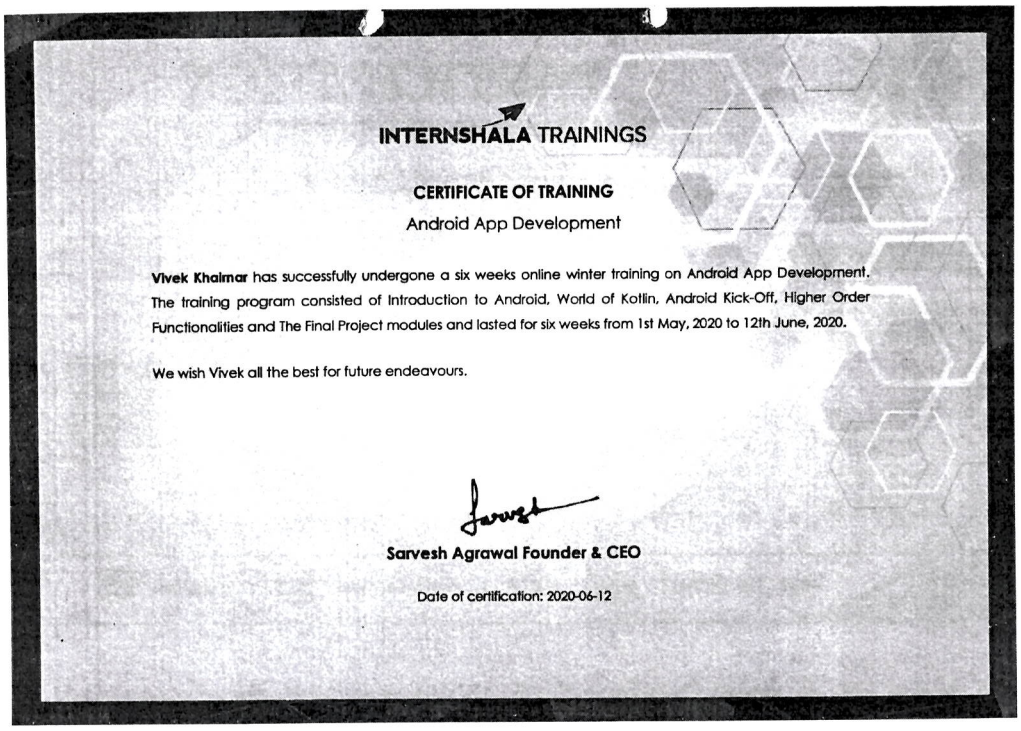
Academic Year 2020-21

1. Vivek Khairnar participated in Smart India Hackathon 2020.

Vivek Khairnar and his team 'The Detectors' participated in Smart India Hackathon 2020 under the mentor Prof. Nitin Kawde. Smart India Hackathon (SIH) 2020 is a national initiative launched by AICTE and MHRD aimed at providing students with a platform to solve some of the pressing problems we face in our daily lives, and to inculcate a culture of product innovation and problem-solving mentality.

2. Vivek Khairnar completed Six week online training Android App development organized by Internshala Training.

Vivek Khairnar has successfully undergone a six week online winter training on Android App development. The training program consist of introduction to Android, world of kotlin, android kick-off, Higher order functionalities, and the final project modules and lasted for six week from 1st May 2020 to 12th June 2020.



INTERNSHALA TRAININGS

CERTIFICATE OF TRAINING

Android App Development

Vivek Khairnar has successfully undergone a six weeks online winter training on Android App Development. The training program consisted of Introduction to Android, World of Kotlin, Android Kick-Off, Higher Order Functionalities and The Final Project modules and lasted for six weeks from 1st May, 2020 to 12th June, 2020.

We wish Vivek all the best for future endeavours.

Sarvesh Agrawal Founder & CEO

Date of certification: 2020-06-12

3. Vivek Khairnar completed online course Python for Machine Learning.

Vivek Khairnar has successfully completed free online course Python for Machine Learning provide by Great Learning Academy on June 2020.

greatlearning
Learning for Life

Certificate of completion

Presented to

Vivek Arvind Khairnar

For successfully completing a free online course

Python for Machine Learning

Provided by

Great Learning Academy

(On June 2020)

To verify this certificate visit verify.greatlearning.in/VOKHWPVM

4. Vivek Khairnar cleared KackerRanks' multiple assessment skills

The HackerRank Skills Certification Test is a standardized assessment aimed at evaluating a developer's technical proficiency. HackerRank strongly believe that well-defined skills can help developers showcase their value regardless of pedigree.

Vivek Khairnar cleared KackerRanks' multiple assessment skills which includes Java (Basic) on 29 June 2020, Python (Basic) on 30 June 2020, C++ (Basic) on 15 Sep 2020, Java (Intermediate) on 15 Sep 2020 and SQL (basic) on 2 May 2021.

5. Major Project of Mustafa Saifee based on his certification

Prof. Nitin Kawde motivated Mustafa Saifee and his team to build their B. Tech major project based on his certification. It was not only help to Mustafa to demonstrate his skills but also share deep understanding with his team mates.

Mustafa and his teams' project "Cloud based Server Room monitoring with Arduino and Microsoft Azure" was aimed at reducing the cost of the setup of the existing system. Reduce capital expenditure by leveraging Microsoft Azure. Increase portability by using the AZ3166 development kit. All the components involved in this project are of very low power

consumption hence no separate specialized power source would be required to run this. Also, the board has the capability to have multiple sensors in multiple room and monitor them on a single dashboard. The scope of this project is limited to a single server room or a server rack depending on the requirement.

Academic Year 2020 – 21

SHRI VILE PARLE KELAVANI MANDAL'S

INSTITUTE OF TECHNOLOGY, DHULE

Survey No. 499, Plot No. 02, Behind Gurudwara, Mumbai-Agra National Highway, Dhule-424001, Maharashtra, India.
Office Phone: 02562-297801 / 297601, Fax : 02562-297801, Mail: IOTDhule@svkm.ac.in

Academic Year 2020 – 21

CERTIFICATE

This is to certify that Ms. Kalyani Narendra Pawar

Mr. Bhushan Deelip Musale

Mr. Mayvesh Manmohan Singh Panjabi

Ms. Mustafa Qureshi Satlee

Students of Information Technology, bearing has successfully completed project report on Cloud Based Server Room Monitoring with Arduino and Microsoft Azure to my satisfaction and submitted the same during the academic year 2020-2021 towards the partial fulfillment of Bachelor of Technology under Dr. Babasaheb Ambedkar Technological University Lonere, under the guidance of Mr.Nitin S. Kawde

Mr. Nitin S. Kawde
Project guide

Mr. Sagar Badjate
Project Coordinator

Dr. Bhushan Chaudhari
Dept. Coordinator

2 | P a g e

Outcome

Vivek Khairnar received multiple placement offers during his academics offering role of software developer. Similarly, Mustafa Saifee received placement in Microsoft as Developer Support.

Strictly Private and Confidential

Date:02-Sep-2021

Vivek Arvind Khairnar
C10042891
61, Parivahan Colony, Depour
9421460754

Dear **Vivek Arvind Khairnar,**

Based on our recent discussion with you, we are pleased to extend an offer to join Accenture Solutions Pvt. Ltd. ("Company") in our Advanced Technology Center, India as per the below terms and conditions:

Job Profile - Application Development Associate
Management Level - 12
Job Family Group- Software Engineering

Please refer to:

- Annexure I for the compensation and benefits details
- Annexure II for the documentation to be submitted by you
- Terms of Employment

Your employment with Accenture will be governed by the clauses mentioned in the attached 'Terms of Employment'. You are required to carefully read and understand these Terms of Employment before responding to this Offer. This Offer and your employment with Accenture is subject to successful completion of the qualifying examination from your college with an aggregate of 65% and above or 6.5 CGPA and above in the current degree as well as satisfactory completion of verification and/or background or reference checks, which may occur at any time prior to or after your effective start date.

Reference Id: 9c2f29bc-f1fd-476b-915f-55feb3f6d434_1
Signed By: Mahesh Vasudeo Zurale

Shaligram infotech
Digitalize your business

18/07/2020

OFFER LETTER

This is certify that **Mr. Vivek Khairnar** have been selected as a **Software Developer** for 6 month training period and after 6 month get offer to permanent employee in our organization.

Your probationary period is for 6 months, during which time if you are not suitable for the position or you feel that this is not the type of work you expected either party could terminate contracts with one month notice and Appraisal will be done after 1 year. Terms and conditions of employment are available for you to read and any clarification should be addressed before the end of your probationary period.

We have kept one of your original mark sheets as a part of documentation. Please note that your joining date is **27th July, 2020.**

Finally, I hope you will enjoy working in our company.

For Shaligram Infotech

Ramesh Marand
Director

Vivek Khairnar

Shaligram House, B/h. Rajpath Club, Off S.G. Highway, Bodakdev, Ahmedabad - 380 059. Ph : +1-6315021166, +91-79-29702400/2500
Email : info@shaligraminfotech.com
Web : www.shaligraminfotech.com

Fwd: Wipro Campus Update_LOI

Vivek Khairnar <khairnarviveka8@gmail.com>
Sat, 8 May 2021, 6:07 PM
To: Karan Sharma <karan.sharma@svkm.ac.in>

***** THE E-MAIL BELOW IS FROM AN EXTERNAL SOURCE. PLEASE DO NOT OPEN ATTACHMENTS OR CLICK LINKS WITHOUT PROPER VERIFICATION. *****

---------- Forwarded message ---------
From: **Campus HR Team** <wipro+email+14as0_3eb2810cf7@talent.icims.com>
Date: Thu, 6 May 2021, 1:37 pm
Subject: Wipro Campus Update_LOI
To: <khairnarviveka8@gmail.com>

May 6, 2021

Dear VIVEK KHAIRNAR ,
Resume Number - 20864309

Based on our discussions with you, we would like to inform you of our intent to offer you the role of **Project Engineer** which will be in Career Band **TRB-II** of the organization.

The salary stack for this role is detailed below. Do reach out to us should you have any clarifications.

COMPONENT	AMOUNT (INR)
Basic	11,670
HRA	5,835
Bonus	2,334
Wipro Benefits Plan (WBP)	4,849
Total Fixed Cash	**24,688**
PF (Employer Contribution)	1,800
Gratuity (5.31% of Basic)	620
Total Fixed Compensation	**27,108**
Other Compensation Benefits	
Health benefit (Medical)	600
Variable Pay	
Target Variable Pay	1,459
Target Cost to Company per month	**29,167**
Total Cost to Company per annum	**3,50,004**

Kindly note this letter of intent shall be followed by a letter of appointment from us.

Microsoft India (R&D) Pvt. Ltd.
Global Technical Support Center
Prestige Ferns Galaxy
Survey No. 7/1, 7/2 & 8/1A
Ambalipura Village, Varthur Hobli
Outer Ring Road, Bengaluru 560103

Tel: + 91 8061772000
www.microsoft.com

Microsoft

30 Sep 2021

To Whom It May Concern

Subject: **Employment Proof**

This letter is to certify that Mustafa Saifee, Employee No. 6130916, designated in the position of SUPPORT ENG, is a Microsoft employee from 13-Sep-2021 through the present date.

Regards,

CHONDU CHENGAPPA
HR SERVICE MANAGER

H.O.D. I.T. Dept.
SVKM's Institute of Technology, Dhule

Shri Vile Parle Kelavani Mandal's

Institute of Technology, Dhule

Department of Electrical Engineering

Project Based Learning Activity Report

Objective:

Students are able to apply their technical knowledge, acquire practical skills in programming, get involved into team processes and understand real problem of society and try to provide solution by applying software engineering approaches.

Methodology Used:

- **Students are informed about important aspects and benefits of Project Base Learning.**
- **Form project groups for interested students.**
- **Assigned faculty mentor to project group.**
- **Try to understand various real problems in different domains and start analysis on them.**
- **Discuss various problems and start finding the solutions on problem.**
- **Take weekly review by mentor**
- **Present current work in front of department faculties after end of every semester.**
- **Promote project work at different technical platforms like project competitions/conferences/journals.**

Shri Vile Parle Kelavani Mandal's Institute of Technology DHULE

H.O.D. Electrical Dept.
SVKM's Institute of Technology, Dhule

Activity No-01

1. **Project Title: Wireless Charging in Dynamic Environment for Electric Vehicle.**
2. **Faculty Mentor: Mr. Sandeep Sunil Ushkewar.**
3. **Students Involve in PBL:**
   - Rutik Badgujar
   - Priyanka Jagtap
   - Neha Hajare
   - Mayuri Wagh
4. **Start/ End Year:**
   - Start Year – **Sept 2019**
   - End Year – **June 2022**

5. **Work in Second Year (Academic Year 2019-2020): -**

- In the semester –III/IV, Department was conducted one motivational session regarding innovative project development under the **Project Base Learning**.
- During this session all faculties of Electrical Engineering shared their ideas regarding hardware. During this discussion faculty realize that student are interested to work with hardware.
- After discussion, faculties suggest that to students make group of 4 to 5 students and start to download latest IEEE or Springer papers for said domain and read it 2-3 times. Complete this activity up to November 2018.
- Dr. Vishal Moyal, HOD EE appoints Mr. Sandeep Ushkewar as a faculty mentor for PBL.
- Following Students form a group for PBL in second year.
  - Rutik Badgujar
  - Priyanka Jagtap
  - Neha Hajare
  - Mayuri Wagh

H.O.D. Electrical Dept.
SVKM's Institute of Technology, Dhule

Shri Vile Parle Kelavani Mandal's Institute of Technology DHULE

1. **Work in Third Year (Academic Year 2020-2021): -**

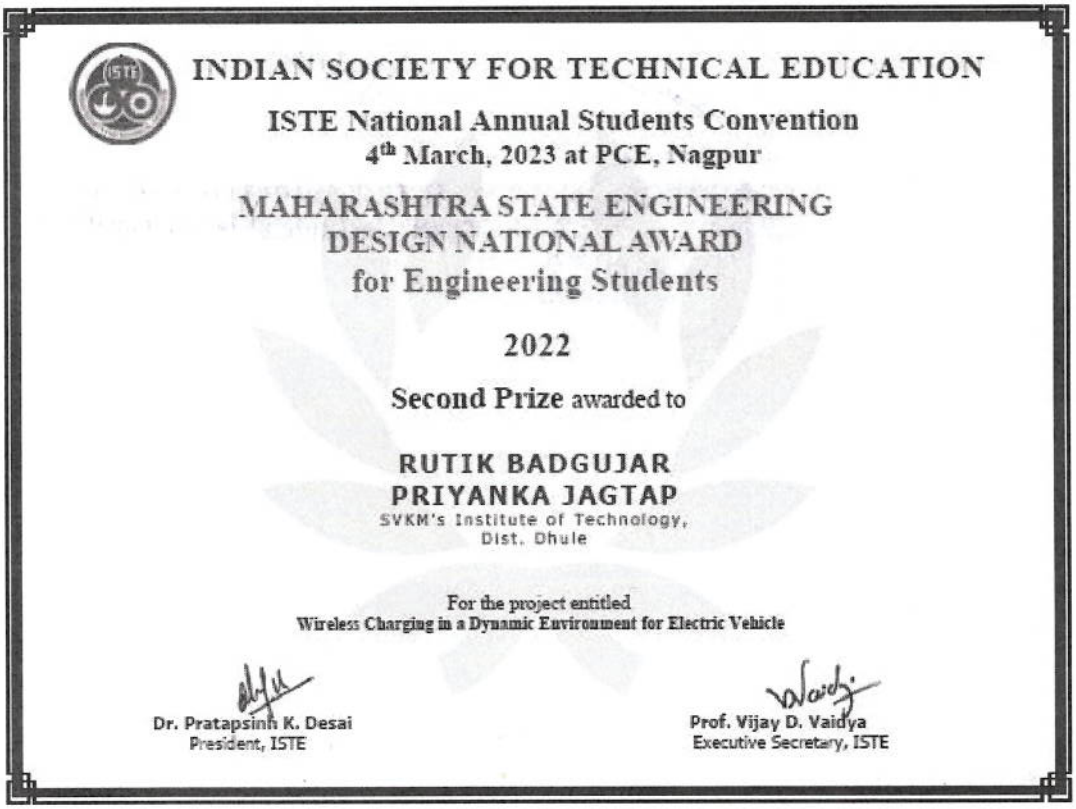
- As per discussion held in previous semester team focus on issues of Electric Vehicles.
- Initially team reads some papers related to Wireless Charging in Dynamic Environment for Electric Vehicle.
- Team realize one problem that, after Wireless Charging in Dynamic Environment for Electric Vehicle started detail analysis for the said problem.
- In the month of January 2020 student participated in project competition held at Shri Shankracharya Technical Institute, Bhilai.

Shri Vile Parle Kelavani Mandal's Institute of Technology DHULE

H.O.D. Electrical Dept.
SVKM's Institute of Technology, Dhule

1. Work in Final Year (Academic Year 2021-2022): -

- Now team was in final year and after securing 2nd rank in Maharashtra State wants to add new things to their project and register this project as final year project with major modification.
- Team started new requirement analysis for the project and found something new like required automation as well as hardware part for the project and register final year project as Wireless Charging in Dynamic Environment for Electric Vehicle.



INDIAN SOCIETY FOR TECHNICAL EDUCATION

ISTE National Annual Students Convention
4th March, 2023 at PCE, Nagpur

MAHARASHTRA STATE ENGINEERING DESIGN NATIONAL AWARD
for Engineering Students

2022

Second Prize awarded to

RUTIK BADGUJAR
PRIYANKA JAGTAP
SVKM's Institute of Technology, Dist. Dhule

For the project entitled
Wireless Charging in a Dynamic Environment for Electric Vehicle

Dr. Pratapsinh K. Desai
President, ISTE

Prof. Vijay D. Vaidya
Executive Secretary, ISTE

H.O.D. Electrical Dept.
SVKM's Institute of Technology, Dhule

Shri Vile Parle Kelavani Mandal's Institute of Technology DHULE

Shri Vile Parle Kelavani Mandal's

Institute of Technology, Dhule

Department of Mechanical Engineering

Project Based Learning Activity Report

Introduction:

The E-Kart Racing Competition offered a unique opportunity to engage in hands-on learning and innovation within the realm of electric vehicles (EVs). Our team embarked on this journey to develop a competitive electric kart while embracing the principles of project-based learning.

Objective:

- Technical Mastery: To acquire in-depth knowledge of electric vehicle components, including motors, batteries, controllers, and sensors.
- Problem-Solving Skills: To address technical challenges and overcome obstacles encountered throughout the project.
- Team Collaboration: To foster effective teamwork, communication, and collaboration among multidisciplinary team members.
- Innovation: To integrate cutting-edge technologies and design innovations into our electric kart.
- Safety Awareness: To prioritize safety in all aspects of the project, from design to testing and competition.

Methodology Used:

- Research and Planning: We conducted extensive research on electric kart design, EV technology, and competition rules. Planning included setting a budget, defining roles, and creating a project timeline.

- Design and Prototyping: Utilizing CAD software, we designed our electric kart, considering aerodynamics, structural integrity, and component integration. We created prototypes to test various design iterations.

- Construction and Integration: With a focus on hands-on learning, we assembled and integrated all components, including the electric motor, batteries, and control systems. This phase required close attention to safety protocols.

Shri Vile Parle Kelavani Mandal's ★ DHULE ★ Institute of Technology

H.O.D. Mechanical Dept.
SVKM's Institute of Technology, Dhule

- **Testing and Optimization: We conducted rigorous testing, collecting data on performance, efficiency, and safety. Data analysis informed iterative design improvements for enhanced performance.**

- **Competition Preparation: As the competition neared, we prepared a compelling presentation to showcase our kart's design, innovations, and advantages. This phase honed our presentation and communication skills.**

Activity No-01

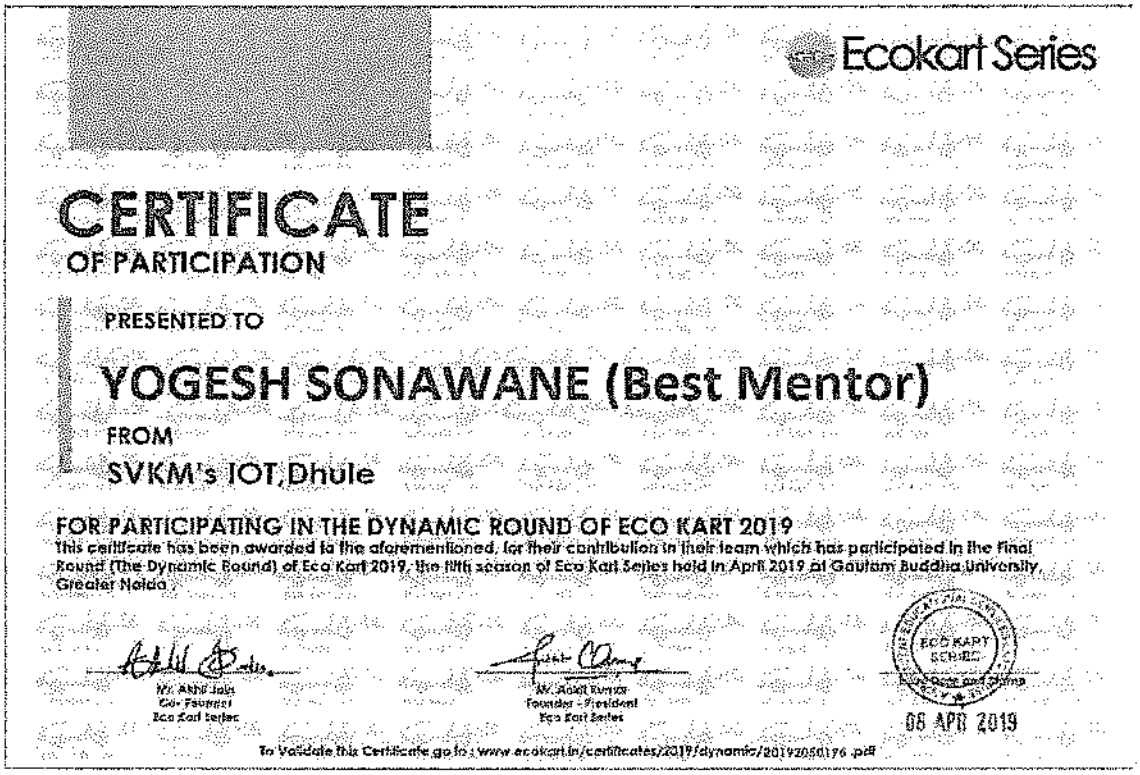
Eco-Kart Series 2K19

The team "S-Falcons "of 15 Engineering students had participated in national level kart making and racing competition named "Eco-Kart Series 2K19". The competition was to design and fabricate a single passenger kart which is operated via battery as per given standards. This competition helped the students to build interest towards automobile and incorporate teamwork, technical skills and management skills themselves. The event was divided into 2 rounds, first was virtual round means a qualifier round in which students were judged how they have planned to proceed for the final event and held on 24th Nov 2018 at SVKM's Dhule campus. Second round was Dynamic round in which kart was tested on track for braking and acceleration, face off, turn table etc., held at Gautam Buddha University, Greater Noida during 4th- 9th April 2019.

1. **Project Title:** ***Design of an E kart for Eco kart series competition.***
2. **Faculty Mentor: Prof. Yogesh Sonawane.**
3. **Students Involve in PBL:** Team of 15 students from SY Mechanical
4. **Start/ End Year:**
   - Start Year – **24th November 2018**
   - End Year – **9th April 2019**

5. **Achievement:** The team "S-Falcons" took extensive efforts apart from the curriculum to learn the E-Go Kart concepts. In this dynamic round team won "Best Mentor" award and nominated for safest kart and best innovations in different categories. Award was given to team Mentor Prof. Yogesh Sonawane with demo check of Rs. 10,000/- and trophy by hands of Chancellor Dr. Bhagwati Prakash Sharma.

Certificates:



Ecokart Series

CERTIFICATE
OF PARTICIPATION

PRESENTED TO

YOGESH SONAWANE (Best Mentor)

FROM

SVKM's IOT,Dhule

FOR PARTICIPATING IN THE DYNAMIC ROUND OF ECO KART 2019

This certificate has been awarded to the aforementioned, for their contribution in their team which has participated in the Final Round (The Dynamic Round) of Eco Kart 2019, the fifth season of Eco Kart Series held in April 2019 at Gautam Buddha University, Greater Noida.

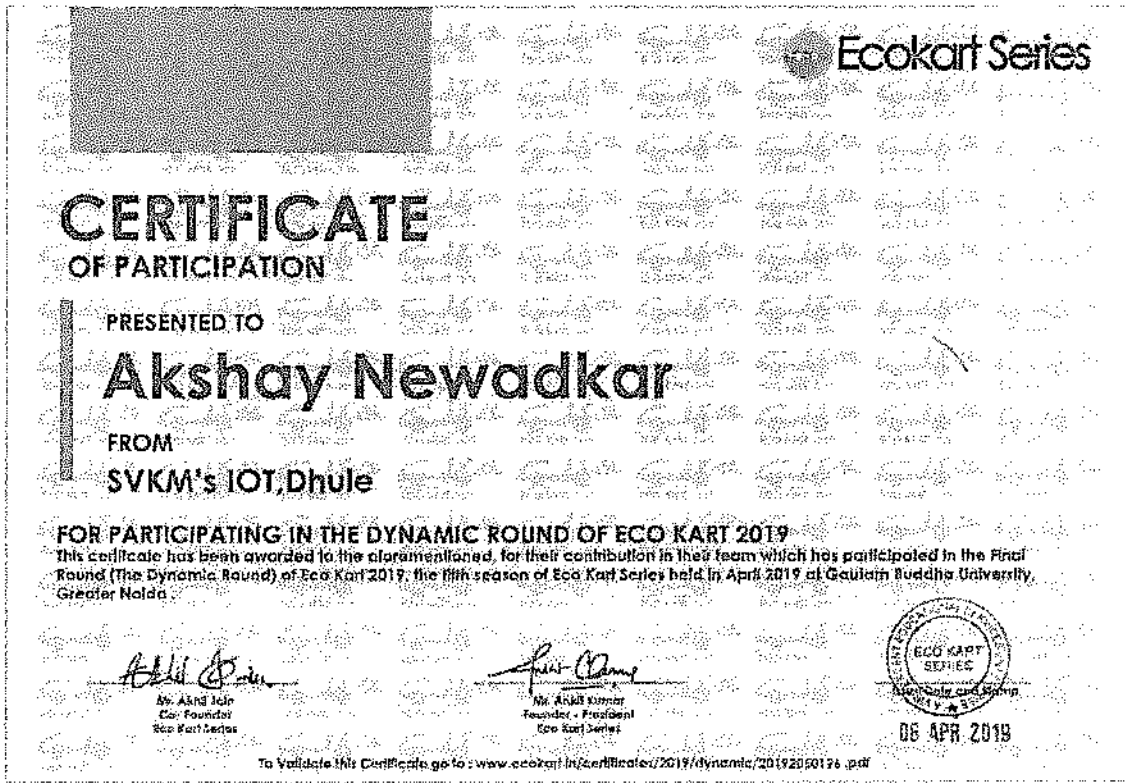
Mr. Akhil Jain
Co- Founder
Eco Kart Series

Mr. Akash Kumar
Founder - President
Eco Kart Series

ECO KART SERIES

06 APR 2019

To Validate this Certificate go to : www.ecokart.in/certificates/2019/dynamic/20192050176.pdf



Ecokart Series

CERTIFICATE
OF PARTICIPATION

PRESENTED TO

Akshay Newadkar

FROM

SVKM's IOT,Dhule

FOR PARTICIPATING IN THE DYNAMIC ROUND OF ECO KART 2019

This certificate has been awarded to the aforementioned, for their contribution in their team which has participated in the Final Round (The Dynamic Round) of Eco Kart 2019, the fifth season of Eco Kart Series held in April 2019 at Gautam Buddha University, Greater Noida.

Mr. Akhil Jain
Co- Founder
Eco Kart Series

Mr. Akash Kumar
Founder - President
Eco Kart Series

ECO KART SERIES

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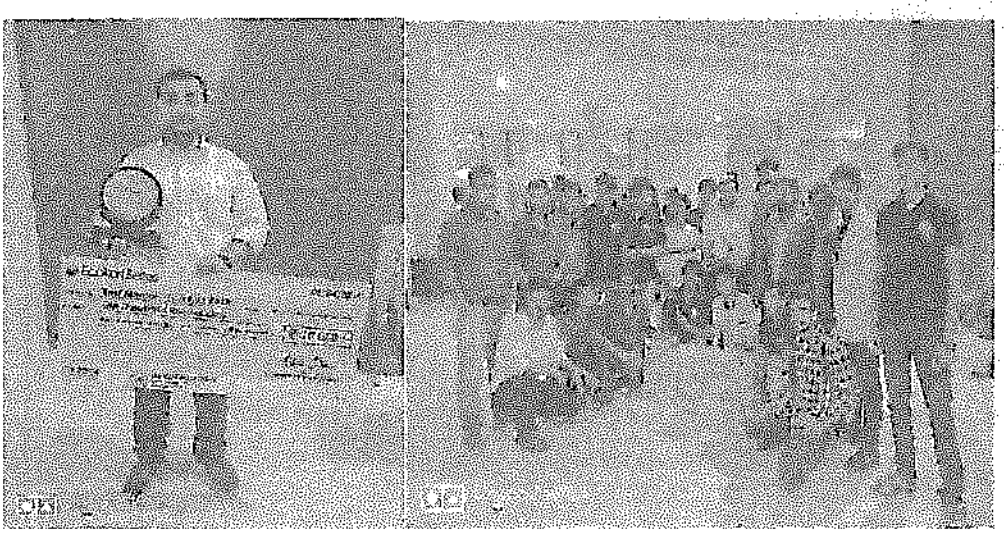
To Validate this Certificate go to : www.ecokart.in/certificates/2019/dynamic/20192050176.pdf



Team S-Falcons with award and trophy

Members of Team S-Falcons at GBU, Greater Noida

Supporting staff of SVKM's IOT

Virtual round via online conferencing at SVKM's IOT, Dhule

Shri Vile Parle Kelavani Mandal's Institute of Technology DHULE

H.O.D. Mechanical Dept.
SVKM's Institute of Technology, Dhule

YS

Shri Vile Parle Kelavani Mandal's

Institute of Technology, Dhule

Department of Mechanical Engineering

Project Based Learning Activity Report

Introduction:

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Methodology Used:

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Shri Vile Parle Kelavani Mandal's ★ DHULE ★ Institute of Technology

H.O.D. Mechanical Dept.
SVKM's Institute of Technology,Dhule

- **Testing and Optimization: We conducted rigorous testing, collecting data on performance, efficiency, and safety. Data analysis informed iterative design improvements for enhanced performance.**

- **Competition Preparation: As the competition neared, we prepared a compelling presentation to showcase our kart's design, innovations, and advantages. This phase honed our presentation and communication skills.**

Activity No-02

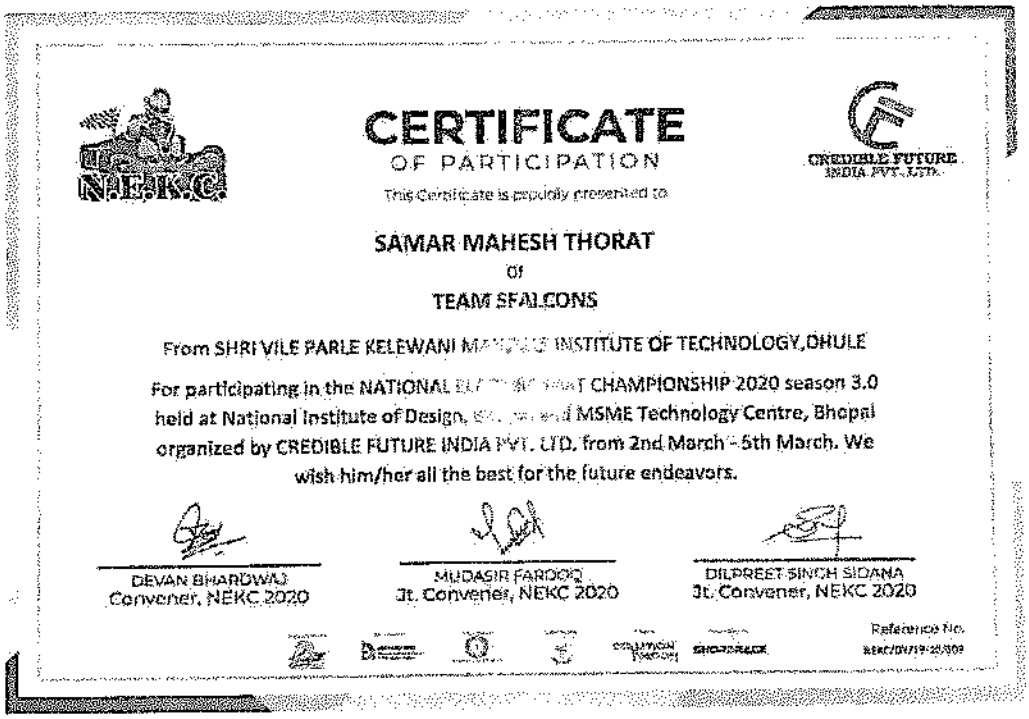
NEKC 2020

A team of 21 engineering students had participated and awarded for *Skidpad Winner (Cash Prize ₹ 10,000/-), Autocross Winner (Cash Prize ₹ 10,000/-), Drag Race Runner Up (Cash Prize ₹ 5000/-), Blind Test Runner Up (Cash Prize ₹ 5000/-) and Best Standee (Cash Prize ₹ 5000/-)* in "NEKC-2020" Electric go-kart championship during 2 Mar to 5 Mar 2020, held at MSME, Bhopal, Madhya Pradesh.

The team leader of "S-Falcons" Mr. Samar Thorat and kart rider Mr. Jayesh Bhamare took a lot of effort along with the team members under the guidance of Prof. Yogesh Sonawane and Prof. Bhushan Behede and how they achieved success at National Level.

1. **Project Title:** ***Design of an E kart for NEKC2020 competition.***
2. **Faculty Mentor: Prof. Yogesh Sonawane.**
3. **Students Involve in PBL:** Team of 21 students from SY and TY Mechanical
4. **Start/ End Year:**
   - Start Year – 2nd March 2020
   - End Year – 5th March 2020

Certificates:



CERTIFICATE

OF PARTICIPATION

This Certificate is proudly presented to

SAMAR MAHESH THORAT

Of

TEAM SFALCONS

From SHRI VILE PARLE KELEWANI MANDALS INSTITUTE OF TECHNOLOGY,DHULE

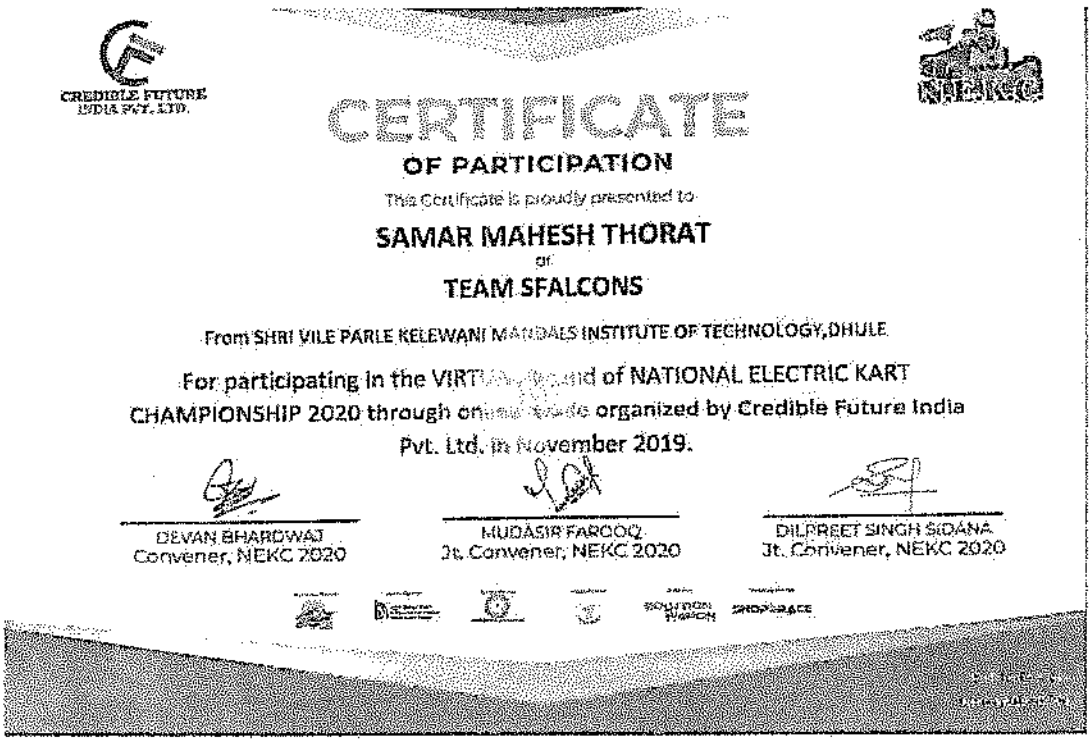
For participating in the NATIONAL ELECTRIC KART CHAMPIONSHIP 2020 season 3.0 held at National Institute of Design, [illegible] and MSME Technology Centre, Bhopal organized by CREDIBLE FUTURE INDIA PVT. LTD. from 2nd March - 5th March. We wish him/her all the best for the future endeavors.

DEVAN BHARDWAJ
Convener, NEKC 2020

MUDASIR FAROOQ
Jt. Convener, NEKC 2020

DILPREET SINGH SIDANA
Jt. Convener, NEKC 2020

Reference No.



CERTIFICATE

OF PARTICIPATION

This Certificate is proudly presented to

SAMAR MAHESH THORAT

Of

TEAM SFALCONS

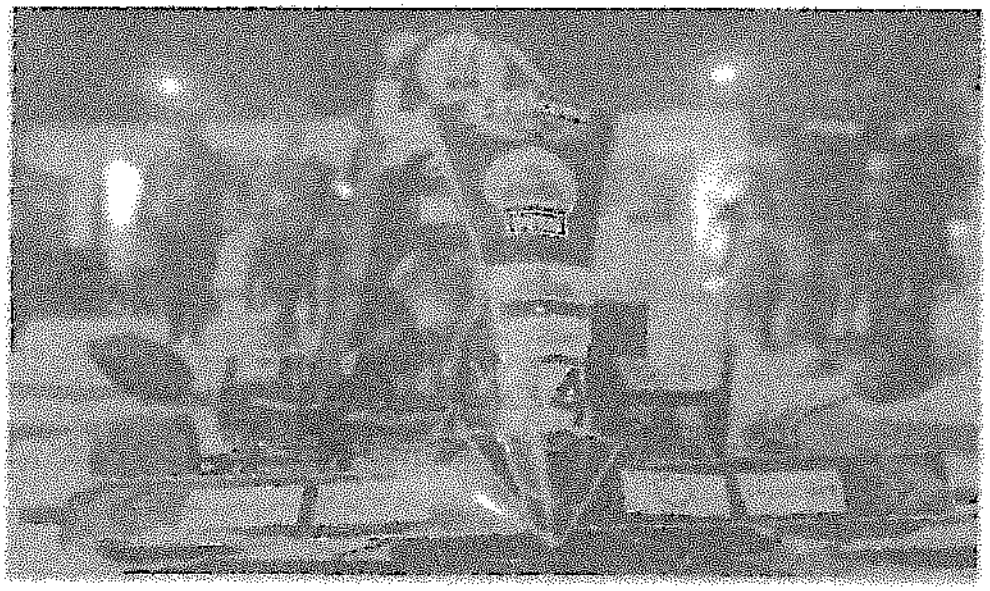
From SHRI VILE PARLE KELEWANI MANDALS INSTITUTE OF TECHNOLOGY,DHULE

For participating in the VIRTUAL [illegible] of NATIONAL ELECTRIC KART CHAMPIONSHIP 2020 through online mode organized by Credible Future India Pvt. Ltd. in November 2019.

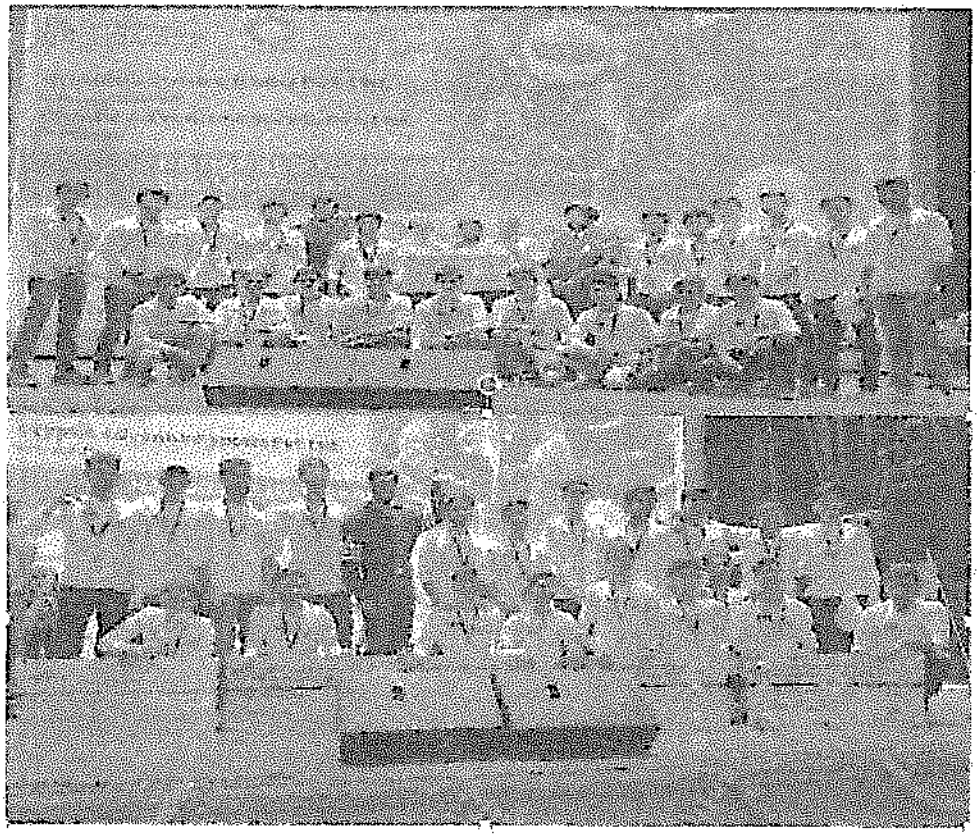
DEVAN BHARDWAJ
Convener, NEKC 2020

MUDASIR FAROOQ
Jt. Convener, NEKC 2020

DILPREET SINGH SIDANA
Jt. Convener, NEKC 2020



Electric Go-kart of NEKC-2020 Competition



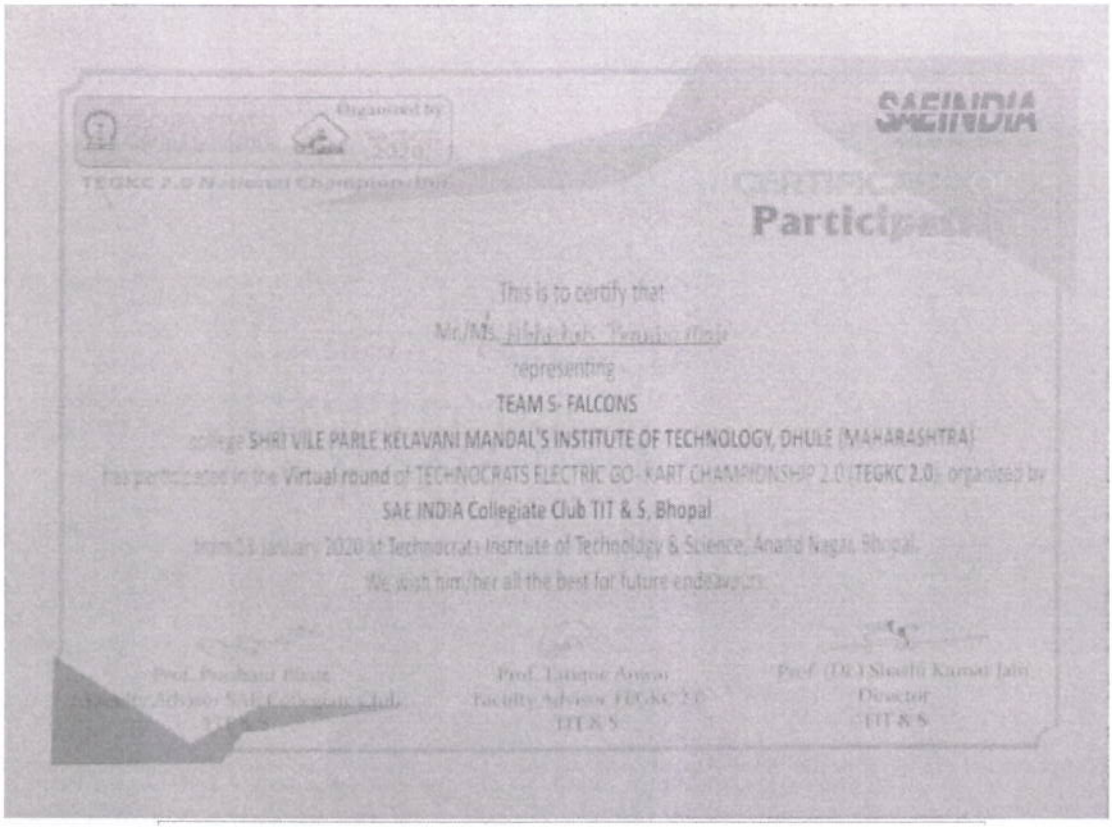
Award Ceremony at MSME, Bhopal, Madhya Pradesh

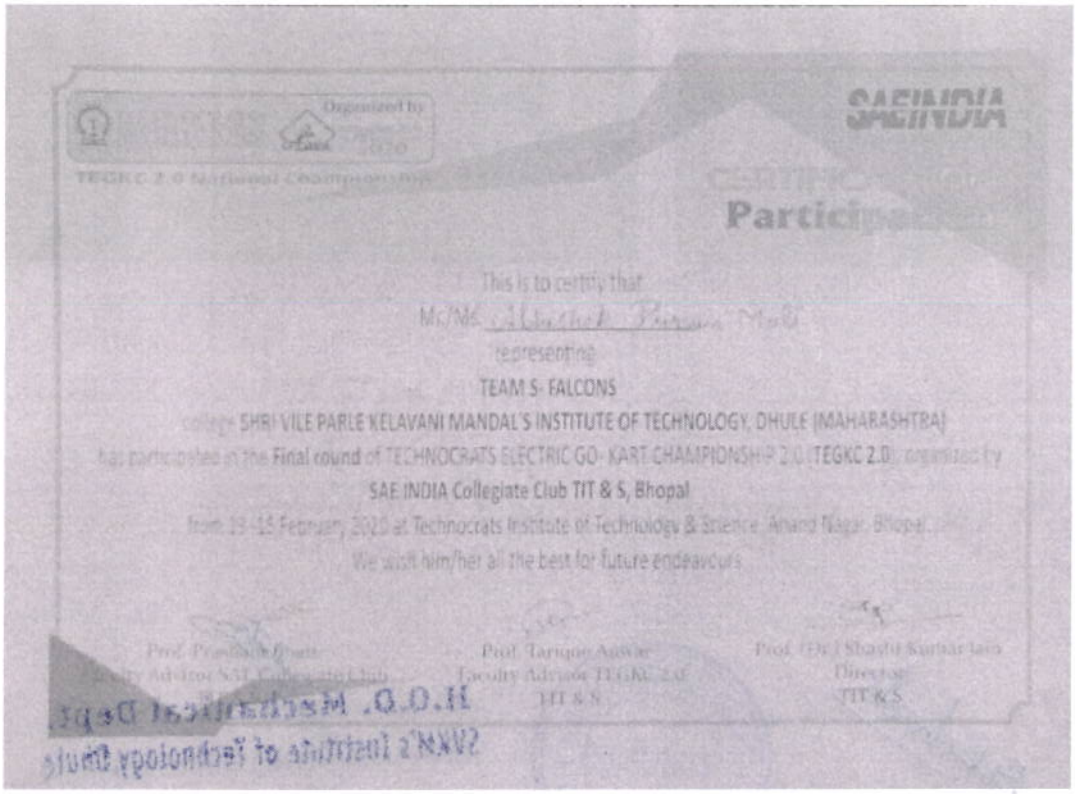
Awards Achieved By "S-Falcons" in NEKC 2020

Shri Vile Parle Kelavani Mandal's Institute of Technology DHULE

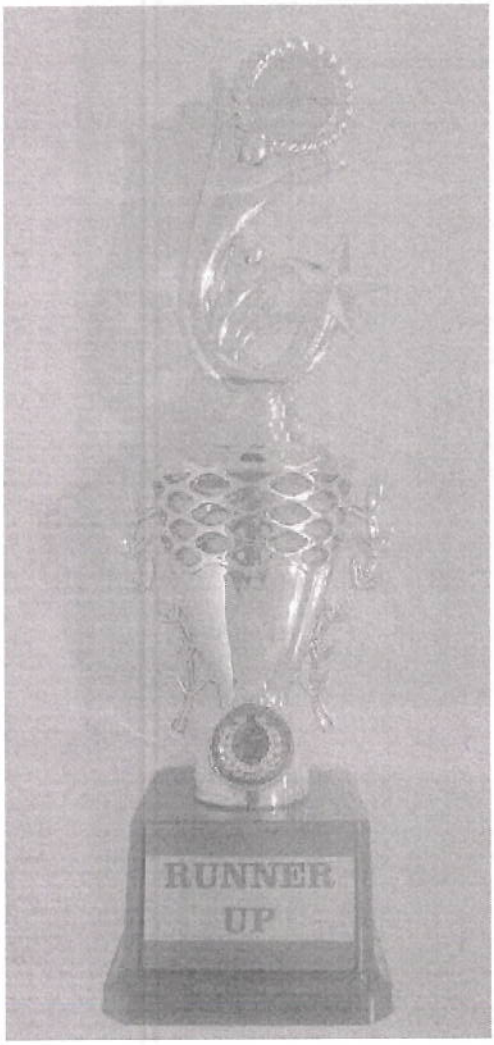
H.O.D. Mechanical Dept.
SVKM's Institute of Technology, Dhule

Certificates:





BuBehede



B.B.Behade

Shri Vile Parle Kelavani Mandal's DHULE Institute of Technology

H.O.D. Mechanical Dept.
SVKM's Institute of Technology, Dhule

Shri Vile Parle Kelavani Mandal's

Institute of Technology, Dhule

Department of Mechanical Engineering

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Shri Vile Parle Kelavani Mandal's DHULE Institute of Technology

H.O.D. Mechanical Dept.
SVKM's Institute of Technology, Dhule

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Activity No-02

TEGKC 2020

A team of 25 engineering students had Participated and awarded for ***Overall Up (Cash prize 60,000/-)*** and ***best skid pad performer (cash prize 6000/-)*** in "TEGKC-2020" Electric go kart championship during 13 Jan to 15 February 2020, held at TIT, Bhopal, Madhya Pradesh.

The team leader of "S-Falcon" **Mr. Durgesh Borse** and Kart rider **Mr. Jayesh Bhamare** of Third Year Mechanical Engineering shared his views on the Efforts taken in last two months by their team under the Guidance of **Prof. Yogesh Sonawane** and **Prof. Bhushan Behede** and how they achieved **All India Rank 2nd** at National level.

1. **Project Title:** ***Design of an E kart for NEKC2020 competition.***
2. **Faculty Mentor: Prof. Yogesh Sonawane.**
3. **Students Involve in PBL:** Team of 25 students from SY and TY Mechanical
4. **Start/ End Year:**
   - Start Year – 13th January 2020
   - End Year – 15th January 2020

Shri Vile Parle Kelavani Mandal's

Institute of Technology, Dhule

Department of Mechanical Engineering

Project Based Learning Activity Report

Objective:

The objective of this activity is to undergo the experiential learning and to acquire the knowledge and skills related to the manufacturing, designing and analysis of mechanical components and the systems.

Methodology Used:

- The EBRC- E bike racing challenge 2020, organized by AMT MotoCorp was announced across all the classes of Mechanical Engineering Department during the AY:2019-2020
- The benefits of Project Based Learning were announced amongst the students.
- A team of 17 students of Mechanical Engineering Department was formed
- Mr. Mohammed Juneduddin (Faculty-Mech Department) was allocated as the Mentor for the team
- Mr. Vinay Kulkarni (Third Year Mechanical Engineering Student) was nominated as the team leader and Mr. Sarang P Chaudhary was nominated (Third Year Mechanical Engineering Student) was nominated as the driver during the competition.
- The name of the team was finalized as " E-Torc"
- The problem statement was discussed with the team members.
- The entire team was distributed domain-wise into three different sub-teams including CAD Design & Analysis, Bill of Material Preparation and the purchasing
- The weekly meeting schedule was fixed for carrying out the project related tasks at the Workshop.
- The total approx. expenditure involved to successfully design the E-Bike and participate in the competition was estimated.

Shri Vile Parle Kelavani Mandal's Institute of Technology DHULE

H.O.D. Mechanical Dept.
SVKM's Institute of Technology, Dhule

Activity No-01

The CAD-Design & Analysis

A. The Design-sub-team prepared the 3D-CAD Design as per the given problem statement by using available 3D-CAD softwares in CAD-Lab including Unigraphics, Autodesk Inventor Professional, etc. The CAD model was analyzed according to the given load conditions and other design constrains, by using Ansys-Mechanical & CFD software

The following members contributed for the CAD-Design:

1. Vinay M. Kulkarni [Third Year Mechanical Engineering Student]
2. Rahul S Sharma [Third Year Mechanical Engineering Student]
3. Aakash R Deore [Third Year Mechanical Engineering Student]
4. Jayesh Smahajan [Third Year Mechanical Engineering Student]
5. Nikhil S Salunkhe [Third Year Mechanical Engineering Student]
6. Sarang P Chaudhary [Third Year Mechanical Engineering Student]
7. Bhojraj P Jadhav [Third Year Mechanical Engineering Student]
8. Anas Ansari [Third Year Mechanical Engineering Student]

Activity No-02

The Bill of Material Preparation

After the CAD-Design and Analysis was successfully carried out, the material requirement and bill of materials the following team members prepared (BOM):

9. Umesh P Patil
10. Mukul K Chaudhary [Third Year Mechanical Engineering Student]
11. Gaurav Wagh [Third Year Mechanical Engineering Student]
12. Shah Nawaz Shah [Third Year Mechanical Engineering Student]
13. Shoiab Kazi [Third Year Mechanical Engineering Student]

Activity No-03

The purchasing of the required material

After the BOM was prepared, the following team members carried out the purchasing of the required material:

14. Kaushal Lohar [Third Year Mechanical Engineering Student]
15. Prasad Jambhale [Third Year Mechanical Engineering Student]
16. Dipak Chavhan [Third Year Mechanical Engineering Student]
17. Pankaj Patil [Third Year Mechanical Engineering Student]

Activity No-04

The fabrication, manufacturing and assembly

After all the required materials was purchased, the fabrication, manufacturing and assembly was carried out at the workshop and machine shops of SVKM's IoT, Dhule. All the team members contributed during this activity

Competition Summary:

Academic year: 2019-2020

Name of the project competition: EBRC- E bike racing challenge

Organized by: AMT MotoCorp

Duration/Date: 13 Jan to 16 Jan 2020

Venue: O.P. Jindal University, Raigarh, Chhattisgarh, India.

Project Mentor: Mr. Mohammed Juneduddin (Assistant Professor, Mech Dept., SVKM's IoT, and Dhule)

Achievement:

Team achieved **All India Rank 4th at National level**

Glimpses of E-Bike Racing Challenge Competition

Figure1: 1E-Bike Team receiving certificate

Figure 2: E-Bike Team

Figure 3: EBike_Designed by students

Figure 4: The trophy issued to the team

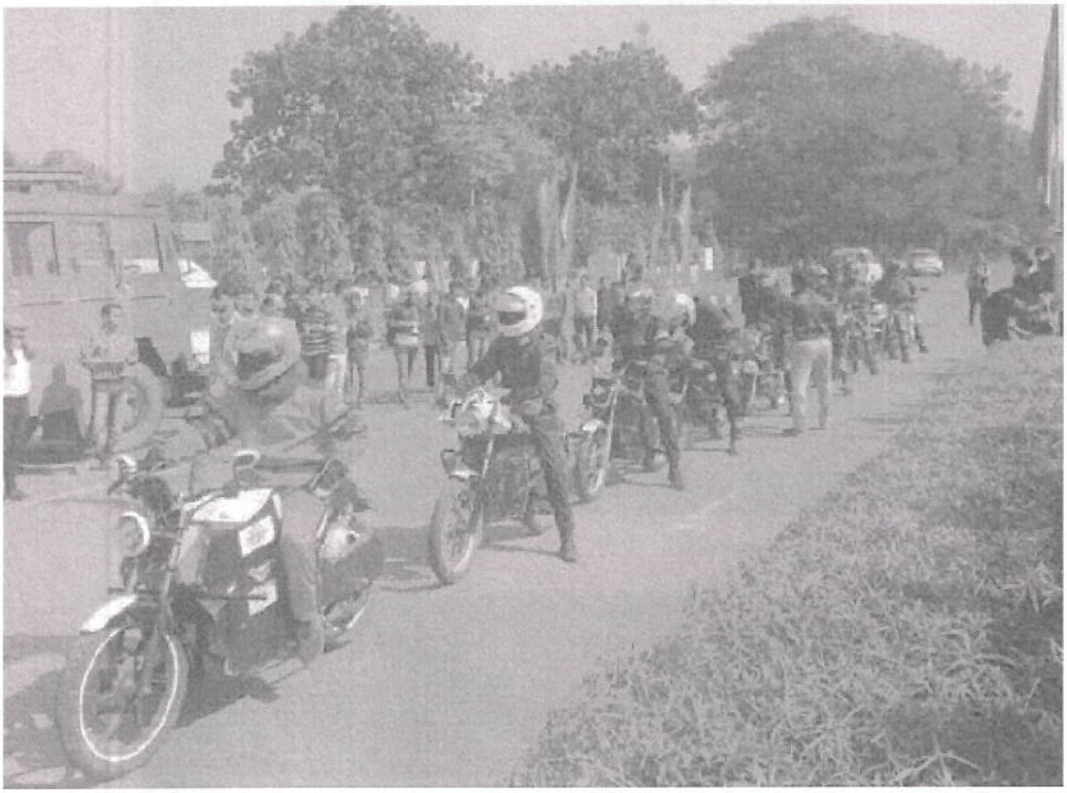


Figure 5: EBike racing Competition-Live

Ref.No _____

AMT MotoCorp

CERTIFICATE OF PARTICIPATION

EBRC -2020

This is to certify that Anas ansari of Team EtoRc representing SVKM IoT, dhule. Participated in Dynamic Round of E-Bike Racing Challenge 2020 organized by AMT MotoCorp, Madhya Pradesh from 13th to 16th of Jan, 2020 at OP Jindal University, Raigarh, Chhattisgarh.

Date: 17th Jan 2020

CONVENER OF EBRC,
President, AMT MotoCorp

Ch. Rajesh Kumar
TECHNICAL HEAD OF EBRC
CTO, ATOM MOTORS

Our Partners

ATOM MOTORS

OPJU

Figure 5: Sample certificate received by all the member students of the team

Shri Vile Parle Kelavani Mandal's DHULE Institute of Technology

H.O.D. Mechanical Dept.
SVKM's Institute of Technology, Dhule

Shri Vile Parle Kelavani Mandal's

Institute of Technology, Dhule

Department of Mechanical Engineering

Project Based Learning Activity Report

Project Title: PREPRATION & CHARACTERIZATION OF FUEL BRIQUETTES MADE FROM AGRICULTURE WASTE

Faculty Mentor: Prof. Satish Patil

Students Involved -

1) Rajan Chulai

2) Varad Kolapkar

3) Noman Shaikh

4) Sarfraz khan

Introduction:

The aim of this study was to analyze the quality of briquettes produced with different proportions of rice husk, rice straw and rice husk ash and cashew nut shells and areca nut shells and with physico-chemical properties of charcoal briquettes. In the absence of the widespread distribution of modern cooking fuels in developing countries, efforts are being made to utilize biomass residues, which abound in most of these countries. This is intended to replace portions of firewood and charcoal and thereby reduce the cutting down of forests for fuel purposes. Briquettes from agro-residues have therefore been promoted as a better replacement to firewood and charcoals for heating, cooking and other industrial applications in both urban and rural communities. The parameters on the production rate, mechanical properties (hardness and porosity), and fuel properties, i.e., moisture content, calorific value, volatile matter content, ash content , fixed carbon content, and combustion rate , were investigated. The fuel application for cooking was evaluated with the flame temperature, water boiling test, thermal efficiency, and greenhouse gases emission. Experimental results showed that the speed had the most effect on the production rate, while the CR got the least effect from all parameters compared to the other properties.

Surplus Yield in farming. By using this harvester farmer may have control for harvesting in his hand. It should have a huge impact on green revolution.

Objective:

1) To identify agriculture waste in SVKM Dhule campus.
2) To calculate the calorific value of agriculture waste in SVKM Dhule campus
3) To make the CAD model of briquette making machine.
4) To compare the calorific values of different agricultural species

Methodology used:

1) Literature review
2) Design CAD model

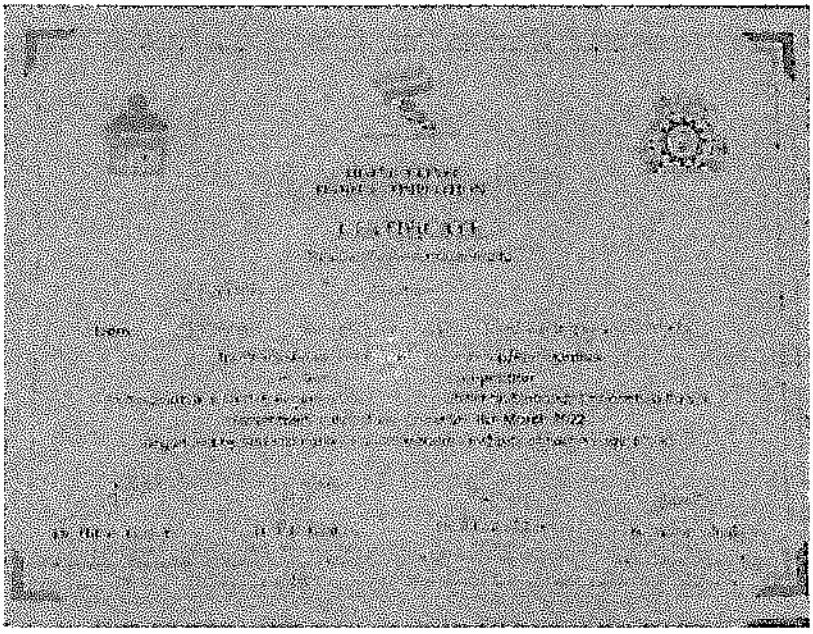
H.O.D. Mechanical Dept.
SVKM's Institute of Technology, Dhule

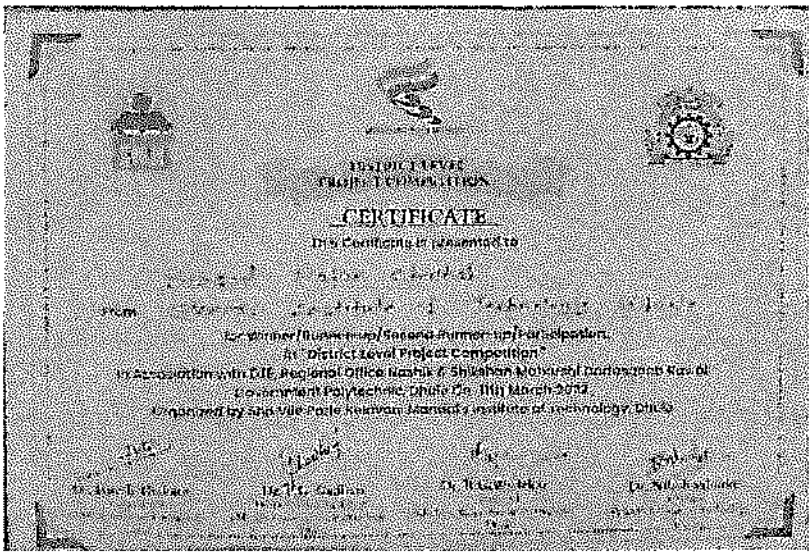
3) Test calorific value.
4) Final report.
5) Presentation of work in District Level Project Competition.

Start/ End Year: - Start Year – July 2021 - End Year –Mar 2022

Presentation of work in District Level Project Competition Certificate:

Received First prize at District level competition





DISTRICT LEVEL
PROJECT COMPETITION

CERTIFICATE

This Certificate is presented to

Kolapkar Varad Laxman

From SVKM's Institute of Technology, Dhule

for Winner/~~Runner-up/Second Runner-up~~/Participation
in "District Level Project Competition"
In Association with DTE, Regional Office Nashik & Shikshan Maharshi Dadasaheb Rawal,
Government Polytechnic, Dhule On 11th March 2022,
Organized by Shri Vile Parle Kelavani Mandal's Institute of Technology, Dhule.

Dr. Hitesh Thakare
Coordinator
SVKM's Institute of Technology, Dhule

Dr. P.G. Gadhari
HOD, Mechanical Engg
S.M.D.R. Government Polytechnic, Dhule

Dr. R.G.Wadekar
Principal
S.M.D.R. Government Polytechnic, Dhule

Dr. Nilesh Salunke
Principal
SVKM's Institute of Technology, Dhule

DISTRICT LEVEL
PROJECT COMPETITION

CERTIFICATE

This Certificate is presented to

Mansoori Sarfraj MD Islam

From SVKM's Institute of Technology, Dhule

for Winner/~~Runner-up/Second Runner-up~~/Participation
in "District Level Project Competition"
In Association with DTE, Regional Office Nashik & Shikshan Maharshi Dadasaheb Rawal,
Government Polytechnic, Dhule On 11th March 2022,
Organized by Shri Vile Parle Kelavani Mandal's Institute of Technology, Dhule.

Dr. Hitesh Thakare
Coordinator
SVKM's Institute of Technology, Dhule

Dr. P.G. Gadhari
HOD, Mechanical Engg
S.M.D.R. Government Polytechnic, Dhule

Dr. R.G.Wadekar
Principal
S.M.D.R. Government Polytechnic, Dhule

Dr. Nilesh Salunke
Principal
SVKM's Institute of Technology, Dhule

H.O.D. Mechanical Dept.
SVKM's Institute of Technology, Dhule

Shri Vile Parle Kelavani Mandal's
Institute of Technology, Dhule
Department of Mechanical Engineering
Project Based Learning Activity Report

Objective:

"To design, build, and pilot-controlled aircraft that demonstrates exceptional aerodynamic performance, innovative engineering, and precise control, aiming to achieve top rankings in the Aero Design Challenge by showcasing creativity, technical skill, and teamwork."

Methodology Used:

1. Understand the Competition:
    - Read and understand the competition rules, guidelines, and judging criteria thoroughly.
    - Identify the specific categories, challenges, or objectives of the competition.
2. Team Formation:
    - Assemble a dedicated and skilled team with members who have expertise in various aspects of aeromodelling, including design, engineering, electronics, and piloting.
3. Define Goals and Objectives:
    - Set clear and achievable goals for your team, such as winning specific categories, achieving certain flight parameters, or displaying innovation.
4. Research and Brainstorm:
    - Conduct research on aerodynamic principles, materials, and components relevant to your aircraft.
    - Brainstorm and generate innovative ideas for your aircraft's design and features.
5. Design Phase:
    - Develop a detailed design plan that includes the aircraft's dimensions, weight distribution, wing shape, and propulsion system.
    - Utilize computer-aided design (CAD) software to create precise 3D models of your aircraft.

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6. Material Selection:
    - Choose lightweight and durable materials for the construction of your aircraft's frame, wings, and other components.
    - Consider factors like weight distribution and balance when selecting materials.
7. Build and Test Prototypes:
    - Construct prototypes of your aircraft to test different design configurations and identify potential issues.
    - Perform wind tunnel tests or computer simulations to optimize the aerodynamics.
8. Build the Final Aircraft:
    - Based on the lessons learned from the prototypes, construct the final version of your aircraft with meticulous attention to detail.
    - Ensure that all components are securely and precisely assembled.
9. Electronics and Control Systems:
    - Install the necessary electronics, such as receivers, servos, and flight controllers, and program them for precise control.
    - Conduct thorough testing of the control systems to ensure stability and responsiveness.
10. Safety Precautions:
    - Prioritize safety throughout the construction and testing phases.
    - Comply with safety regulations and guidelines related to aeromodelling and the competition venue.
11. Flight Testing and Optimization:
    - Conduct multiple flight tests to fine-tune the aircraft's performance, stability, and control.
    - Record flight data and make adjustments based on the results.
12. Documentation:
    - Create comprehensive documentation that includes design plans, construction details, testing results, and any innovations or unique features.
    - Prepare a presentation to explain your aircraft's design and performance to judges.
13. Competition Day:
    - Arrive early at the competition venue to set up and conduct final tests.

SVKM's Institute of Technology, Dhule
N.D.B. Mechanical Dept.

- Be prepared to demonstrate your aircraft's capabilities and answer questions from judges.

14. Teamwork and Communication:

- Maintain open and effective communication within your team.
- Collaborate closely to address challenges and make decisions.

Activity No-01

On National Science Day, faculties from mechanical engineering visited to Science day Exhibition 2020, where students from first year mechanical engineering presented their project and Mr. Bhatu Patil received the 1st prize in that project exhibition. Mr. Bhatu Patil further counselled by faculty members of department to participate in further activities of department. The goal of this Competition is to provide detail journey of this Competition from second year to the final year and to know the achievements of the team during development. With the help of following points, we will know the details of the developments of this competition.

- **Competition : Drone Development Challenge 2022**
- **Faculty Mentor: Prof. Satish R Patil**
  Prof. Dhiraj K Bhandarkar
- **Students Involve in CBL:**
  1. Patil Bhatu Santosh
  2. Chitte Chinmay Satish
  3. Patil Deepak Ukha
  - Patil Pratik Govind
  - Gharde Aditya Virendra
  - Marathe Pratik Sudam
  - Badgujar Chaitanya Pravin
- **Start/ End Year:**
  1. Start Year – 2021
  2. End Year – 2022
- **Work in Second And Third Year (Academic Year 2021-2022): -**

- In the semester –III/IV, Department was conducted one motivational session regarding innovative project development under the Competition
- During this session, faculties of Mechanical engineering shared their ideas regarding real time problem statements. During this discussion faculty, realize that student are interested to work in medical, traffic, Agriculture, Military, etc.

- After discussion, faculties suggest that to students make group of 4 to 5 students and start to download latest IEEE or Springer papers for said domain and read it 2-3 times. Complete this activity up to November 2018.
- Following Students form a group for PBL in second year.

1. Bhatu Patil (T.Y Mechanical)
2. Chinmay Chitte (T.Y Mechanical)
3. Deepak Patil (T.Y Mechanical)
4. Gharde Aditya (S.Y Mechanical)
5. Patil Pratik (S.Y Mechanical)
6. Marathe Pratik (S.Y Mechanical)
7. Badgujar Chaitanya (S.Y Mechanical)

Students discussed different topics or problem statements in medical domain with mentor.

- Mentor suggested that try to find out real word problems on road safety and medical emergency.
- At the end of year, students discussed some problems with accident patients on road and required medical facilities. Students discussed different topics or problem statements in medical domain with mentor.
- Mentor suggested that try to find out real word problems on road safety and medical emergency.
- At the end of year, students discussed some problems with accident patients on road and required medical facilities.

- **Prize at Competition**

- Students attended competition at SAEISS Aero design competition at SRM Institute of science and technology Chennai from 01-09-2022 to 03-09- 2022.
- The team received **second rank for CFD Analysis** for designed model.

Certificates:

SAEINDIA
SOUTHERN SECTION

AERO DESIGN CHALLENGE 2022

CERTIFICATE OF ACHIEVEMENT

This is to certify that

Mr. / Ms. CHINMAY SATISH CHITTE of

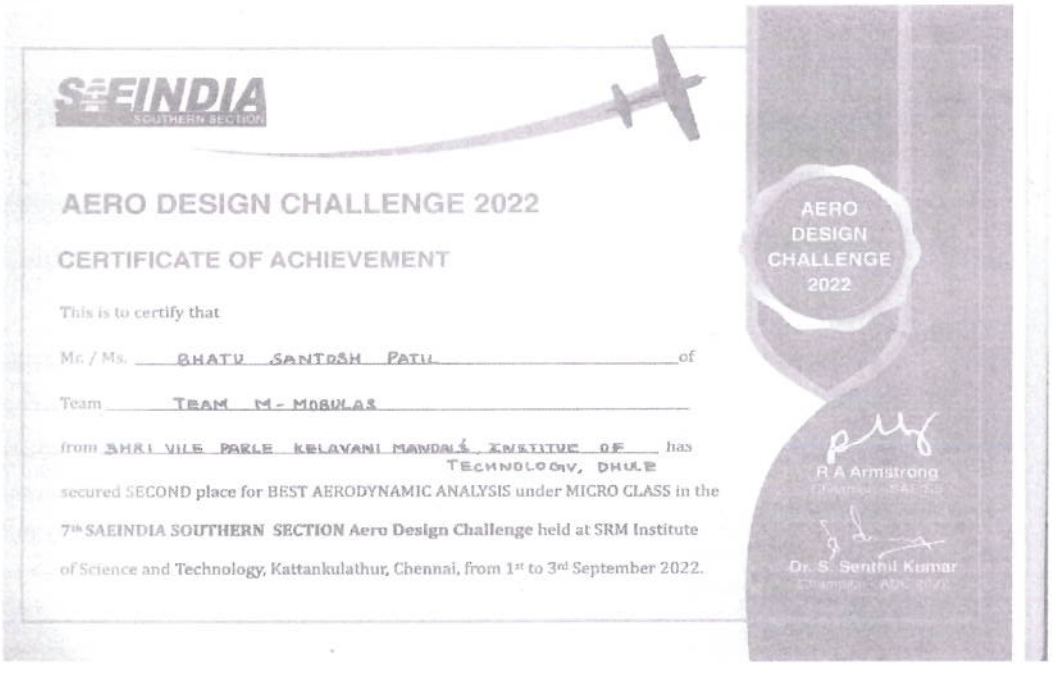
Team TEAM M-MOBULAS

from SHRI VILE PARLE KELAVANI MANDAL'S, INSTITUTE OF TECHNOLOGY, DHULE has secured SECOND place for BEST AERODYNAMIC ANALYSIS under MICRO CLASS in the 7th SAEINDIA SOUTHERN SECTION Aero Design Challenge held at SRM Institute of Science and Technology, Kattankulathur, Chennai, from 1st to 3rd September 2022.

AERO DESIGN CHALLENGE 2022

R A Armstrong
Chairman SAEISS

Dr. S. Senthil Kumar
Chairman ADC 2022



SAEINDIA
SOUTHERN SECTION

AERO DESIGN CHALLENGE 2022

CERTIFICATE OF ACHIEVEMENT

This is to certify that

Mr. / Ms. BHATU SANTOSH PATIL of

Team TEAM M-MOBULAS

from SHRI VILE PARLE KELAVANI MANDAL'S, INSTITUTE OF TECHNOLOGY, DHULE has secured SECOND place for BEST AERODYNAMIC ANALYSIS under MICRO CLASS in the 7th SAEINDIA SOUTHERN SECTION Aero Design Challenge held at SRM Institute of Science and Technology, Kattankulathur, Chennai, from 1st to 3rd September 2022.

AERO DESIGN CHALLENGE 2022

R A Armstrong
Chairman SAEISS

Dr. S. Senthil Kumar
Chairman ADC 2022

SAEINDIA
SOUTHERN SECTION

AERO DESIGN CHALLENGE 2022

CERTIFICATE OF ACHIEVEMENT

This is to certify that

Mr. / Ms. PRATIK GOVIND PATIL of

Team TEAM M-MODULOS

from SHRI VILE PARLE KELAVANI MANDAL'S INSTITUTE OF TECHNOLOGY - DHULE has

secured SECOND place for BEST AERODYNAMIC ANALYSIS under MICRO CLASS in the **7th SAEINDIA SOUTHERN SECTION Aero Design Challenge** held at SRM Institute of Science and Technology, Kattankulathur, Chennai, from 1st to 3rd September 2022.

AERO DESIGN CHALLENGE 2022

R A Armstrong
Chairman - SAE/SS

Dr. S. Senthil Kumar
Chairman - ADC 2022

SAEINDIA
SOUTHERN SECTION

AERO DESIGN CHALLENGE 2022

CERTIFICATE OF ACHIEVEMENT

This is to certify that

Mr. / Ms. ADITHYA VIRENDRA GHARDE of

Team TEAM M-MODULAS

from SHRI VILE PARLE KELAVANI MANDAL'S INSTITUTE OF TECHNOLOGY - DHULE has

secured SECOND place for BEST AERODYNAMIC ANALYSIS under MICRO CLASS in the **7th SAEINDIA SOUTHERN SECTION Aero Design Challenge** held at SRM Institute of Science and Technology, Kattankulathur, Chennai, from 1st to 3rd September 2022.

AERO DESIGN CHALLENGE 2022

R A Armstrong
Chairman - SAE/SS

Dr. S. Senthil Kumar
Chairman - ADC 2022

SAEINDIA
SOUTHERN SECTION

AERO DESIGN CHALLENGE 2022

CERTIFICATE OF ACHIEVEMENT

This is to certify that

Mr. / Ms. PRATIK SUDAM MARATHE of

Team TEAM M-MOBULAS

from SHRI VILE PARLE KELAVANI MANDAL'S, INSTITUTE OF TECHNOLOGY - DHULE has secured SECOND place for BEST AERODYNAMIC ANALYSIS under MICRO CLASS in the 7th SAEINDIA SOUTHERN SECTION Aero Design Challenge held at SRM Institute of Science and Technology, Kattankulathur, Chennai, from 1st to 3rd September 2022.

AERO DESIGN CHALLENGE 2022

R A Armstrong
Chairman - SAEISS

Dr. S. Senthil Kumar
Chairman - ADC 2022

SAEINDIA
SOUTHERN SECTION

AERO DESIGN CHALLENGE 2022

CERTIFICATE OF ACHIEVEMENT

This is to certify that

Mr. / Ms. CHAITANYA PRAVIN BADGUJAR of

Team TEAM M-MOBULAS

from SHRI VILE PARLE KELAVANI MANDAL'S, INSTITUTE OF TECHNOLOGY - DHULE has secured SECOND place for BEST AERODYNAMIC ANALYSIS under MICRO CLASS in the 7th SAEINDIA SOUTHERN SECTION Aero Design Challenge held at SRM Institute of Science and Technology, Kattankulathur, Chennai, from 1st to 3rd September 2022.

AERO DESIGN CHALLENGE 2022

R A Armstrong
Chairman - SAEISS

Dr. S. Senthil Kumar
Chairman - ADC 2022

Shri Vile Parle Kelavani Mandal's Institute of Technology DHULE

H.O.D. Mechanical Dept.
SVKM's Institute of Technology, Dhule

Shri Vile Parle Kelavani Mandal's

Institute of Technology, Dhule

Department of Mechanical Engineering

Project Based Learning Activity Report

Objective:

Student is able to apply his technical knowledge, acquire practical skills in electronics, get involved into team processes, understand real problem of society, and try to provide solution by applying it into a modal of engineering approach.

Methodology Used:

- Students are informed about important aspects and benefits of Project Base Learning.
- Assigned faculty mentor to project group.
- Try to understand various real problems in different domains and startanalysis on them.
- Discuss various problems and start finding the solutions on problem.
- Take weekly review by mentor
- Present current work in front of department faculties after end of everysemester.
- Promote project work at different technical platforms like project competitions, etc

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H.O.D. Mechanical Dept.
SVKM's Institute of Technology,Dhule

Activity No-01

Welcome to the ***Emergency Power Bank*** project. The goal of this case study is to provide detail journey of this project in the third year and to know the achievements during development. With the help of following points, I will know the details of the developments of this project.

1. **Project Title:** ***Emergency Power Bank***
2. **Faculty Mentor: Prof. Satish Patil.**
3. **Student Involve in PBL:**

- Pratik Govind Patil

4. **Start/ End Year:**

- Start Year – **Sept 2022**
- End Year – **March 2023**

1. **Work in Third Year (Academic Year 2022-2023): -**

- Firstly and problem statement is identified which is as follows:
- If we see, most of the time at emergency battery of cell phone and other related devices gets discharge. That is, at the time of emergency for proceeding a call also the battery is not that much charged.
- This emergencies are of many kind some of them are as follows:

1. Let us say if someone is travelling from vehicle and the petrol get fresh at a place where there is no source available for calling, while phone battery has discharged.
2. If someone has stuck at some places, and his mobile phones battery has discharged, etc.

- Now, our objective is to help the people at the time of emergency.
- For that purpose, we need to make some product, which is helpful to charge the mobile phone batteries at the time of emergency, which should be affordable to all and it should act as a self-defense device.
- The another objectives to make the product multipurpose that is in the form of acceptancy's of the source that is energy source , in a deeper sense it should accept the multiple power sources to charge the cell phone.
- That product is nothing but the ***Emergency Power Bank.***

1. Introduction:

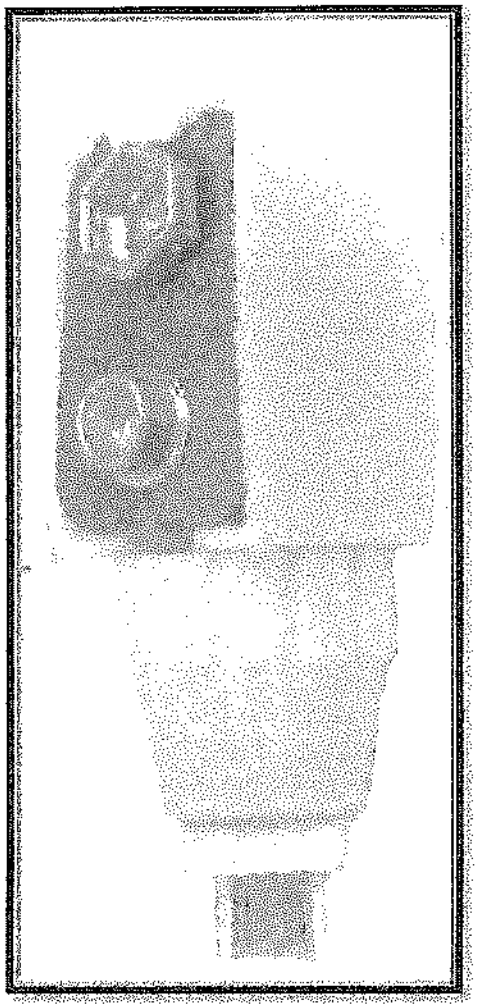


Figure1.1: Emergency Power Bank.

- This emergency Power Bank that is EPB charges the batteries of cell phone and other related devices up to 18% to 20%.
- This emergency Power Bank uses multiple power sources to charge the battery of the cell phone.
- This multiple sources are enlisted and shown below:

1. Non-rechargeable battery.
2. Small Solar PV panel.
3. Rechargeable battery.

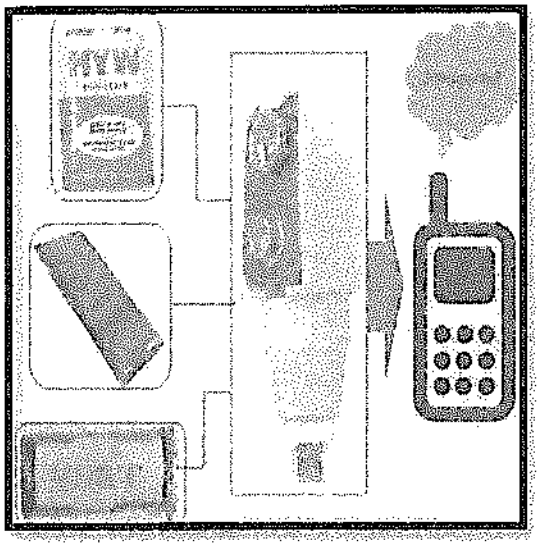


Figure 1.2: EPB with Multiple power sources.

2. Advantages:

- The price of this emergency Power Bank is very less approximately 30rs.
- The design of this emergency power bank is unique, it is very compact, and hence, it is easy to carry.
- This emergency Power Bank uses multiple power sources to charge the mobile.
- This EPB also uses solar power to charge cell phone.
- This EPB is easy to hide.

3. Applications:

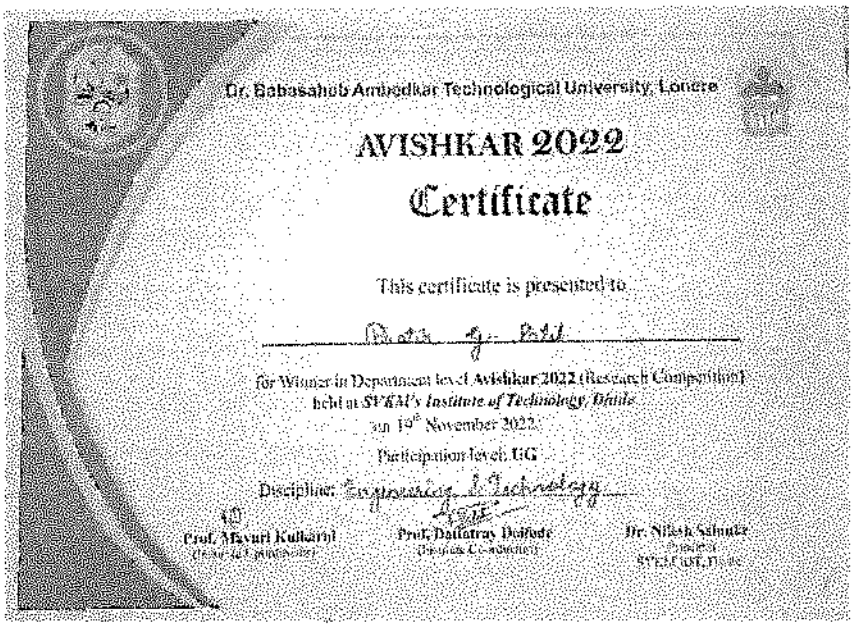
- This ***EPB*** is applicable for every cell phone user at the time of emergency.
- It is also applicable in the domain of military that is military officers can also use this as a self-defense device.
- It can also be used by media persons dost who are under secret missions or operations.
- It can also be helpful for the people like ministers, etc.

4. Competition:

- In the month of November 2023, this project was registered **in AVISHKAR 2022(Research Competition).**
- At this AVISHKAR 2022 competition, I have been designated as a winner at the department level of mechanical engineering and participated at the college level at Shri vile Parle Kelvani Mandal's institute of technology, Dhule.

5. Certificates:

1. **Certificate of department level:**



Dr. Babasaheb Ambedkar Technological University, Lonere

AVISHKAR 2022

Certificate

This certificate is presented to

for Winner in Department level Avishkar 2022 (Research Competition)
held at *SVKM's Institute of Technology, Dhule*
on 19th November 2022.

Participation level: UG

Discipline: Engineering & Technology

Prof. Mayuri Kulkarni | Prof. Dattatray Dolfode | Dr. Nilesh Salunke

2. Certificate of participation at college level (Shri vile Parle Kelvani Mandal institute of technology, Dhule).

Dr. Babasaheb Ambedkar Technological University, Lonere

AVISHKAR 2022

Certificate

This certificate is presented to

Pratik Patil

for participation in Avishkar 2022 (Research Competition)
held at *SVKM's Institute of Technology, Dhule*
on 19th November 2022.

Participation level: UG

Discipline: Engineering & Technology

Prof. Mayuri Kulkarni (Institute Coordinator) | Prof. Dattatray Dolfode (Institute Coordinator) | Dr. Nilesh Salunke Principal SVKM IOT, Dhule

- Student Profile

Pratik Govind Patil

MEMBER

SAP ID :14005200016

Third Year

pratikgpatil19@gmail.com

9172737464

Shri Vile Parle Kelavani Mandal

Survey no. 499, SVKMs IOT Dhule, Behind Gurudwara, Dhule 424001

H.O.D. Mechanical Dept.
SVKM's Institute of Technology,Dhule

Shri Vile Parle Kelavani Mandal's ★ Institute of Technology ★ DHULE

BB

Shri Vile Parle Kelavani Mandal's
INSTITUTE OF TECHNOLOGY, DHULE
Approved by AICTE, New Delhi, Govt. of Maharashtra and Affiliated to DBATU, Lonere

Department of Mechanical Engineering

Report of Project Based Learning (PBL) Activity

State level project competition - DIPEX 2023

Objective of PBL

To develop a deep understanding of desiccant operated dehumidifier components, including desiccant wheel, desiccant material, motor-belts, and sensors, through hands-on experience.

Context of PBL

Identify and address technical challenges and obstacles that arise during the design and manufacturing of desiccant wheel dehumidifiers.

Outcome of the PBL Activity – Project Qualified for 03 Days state level project exhibition at Amaravati, Maharashtra

Details of the Event:

DIPEX, started in the year 1986, is a State level exhibition cum competition of the working models prepared by the students of Diploma, Degree, PG in Engineering as well as Agriculture in the State of Maharashtra and Goa. It is a unique platform of Industry-Institute-Society Interaction. This year, 32nd edition of DIPEX was held during 7th to 9th April, 2023 at Amravati.

Following Students of Mechanical Engineering along with the mentor presented the institute at state level project exhibition cum competition. Name of the students and mentor are as follows –

Sr. No.	Name	Designation	Role
1	Mr. Chinmay Chitte	Student, Final Year - Mechanical	Group Member 1
2	Mr. Manas Ahire	Student, Final Year - Mechanical	Group Member 2
3	Mr. Sumeet Pandey	Student, Final Year - Mechanical	Group Member 3
4	Mr. Pankaj Jangid	Student, Final Year - Mechanical	Group Member 4
5	Mr. Bhushan Behede	Assistant Professor, Mechanical	Group mentor (Project guide)

BBehede

Shri Vile Parle Kelavani Mandal's Institute of Technology DHULE

H.O.D. Mechanical Dept.
SVKM's Institute of Technology, Dhule

Shri Vile Parle Kelavani Mandal's
INSTITUTE OF TECHNOLOGY, DHULE
Approved by AICTE, New Delhi, Govt. of Maharashtra and Affiliated to DBATU, Lonere

Department of Mechanical Engineering

Photographs from the events –

Certificate of students:

1. **Chinmay Satish Chitte, Student, Final Year Mechanical (Pass out – 2022-23)**

32
DIPEX
Organised by
ABVP
G20

CERTIFICATE

OF PARTICIPATION

This is to certify that Mr./Ms. Chinmay Satish Chitte from Shri Vile Parle Kelavani Mandal's Institute of technology, Dhule Participated with the project Design and fabrication of rotary dehumidifier Under the theme Energy in a State Level Exhibition cum Competition of Working Models prepared by the students of Maharashtra and Goa

DIPEX-2023

Held during 7th to 9th April 2023, at Sipna College of Engineering and Technology, Amravati.

आपका वर्तमान कर्तृत्व भारतमाता के चरणों में समर्पित हो ।

Shri. Arun Lakhani, MD,Vishwaroop Group
Shri. Ram Bhogale, President, BRIJAN Trust
Prof. Nitin Gupta, President, ABVP Vidharbha
Shri. Rushikesh Potdar, Convener, DIPEX - 2023

S.V.K.M's Institute of Technology,Dhule
H.O.D. Mechanical Dept.

Page **2** of **4**

2. **Manan Pravin Ahire, Student, Final Year Mechanical (Pass out – 2022-23)**

32
DIPEX
Organised by
ABVP
G20

CERTIFICATE

OF PARTICIPATION

This is to certify that Mr./Ms. Manas Pravin Ahire
from Shri Vile Parle Kelavani Mandal's Institute of technology, Dhule
Participated with the project Design and fabrication of rotary dehumidifier
Under the theme Energy in a State Level Exhibition cum Competition of Working Models prepared by the students of Maharashtra and Goa

DIPEX-2023

Held during 7th to 9th April 2023,
at Sipna College of Engineering and Technology, Amravati.

आपका वर्धमान कर्तृत्व भारतमाता के चरणों में समर्पित हो ।

Shri. Arun Lakhani — Shri. Ram Bhogale — Prof. Nitin Gupta — Shri. Rushikesh Potdar

3. **Pankaj Mahesh Jangid, Student, Final Year Mechanical (Pass out – 2022-23)**

32
DIPEX
Organised by
ABVP
G20

CERTIFICATE

OF PARTICIPATION

This is to certify that Mr./Ms. Pankaj Mahesh Jangid
from Shri Vile Parle Kelavani Mandal's Institute of technology, Dhule
Participated with the project Design and fabrication of rotary dehumidifier
Under the theme Energy in a State Level Exhibition cum Competition of Working Models prepared by the students of Maharashtra and Goa

DIPEX-2023

Held during 7th to 9th April 2023,
at Sipna College of Engineering and Technology, Amravati.

आपका वर्धमान कर्तृत्व भारतमाता के चरणों में समर्पित हो ।

Shri. Arun Lakhani — Shri. Ram Bhogale — Prof. Nitin Gupta — Shri. Rushikesh Potdar

BeBehede

H.O.D. Mechanical Dept.
SVKM's Institute of Technology,Dhule

4. Sumeet Anand Pandey, Student, Final Year Mechanical (Pass out – 2022-23)

32

DIPEX

Organised by

ABVP

CERTIFICATE

OF PARTICIPATION

This is to certify that Mr./Ms. Sumeet Anand Pandey
from Shri Vile Parle Kelavani Mandal's Institute of technology, Dhule
Participated with the project Design and fabrication of rotary dehumidifier
Under the theme Energy in a State Level Exhibition cum Competition of Working Models prepared by the students of Maharashtra and Goa

DIPEX-2023

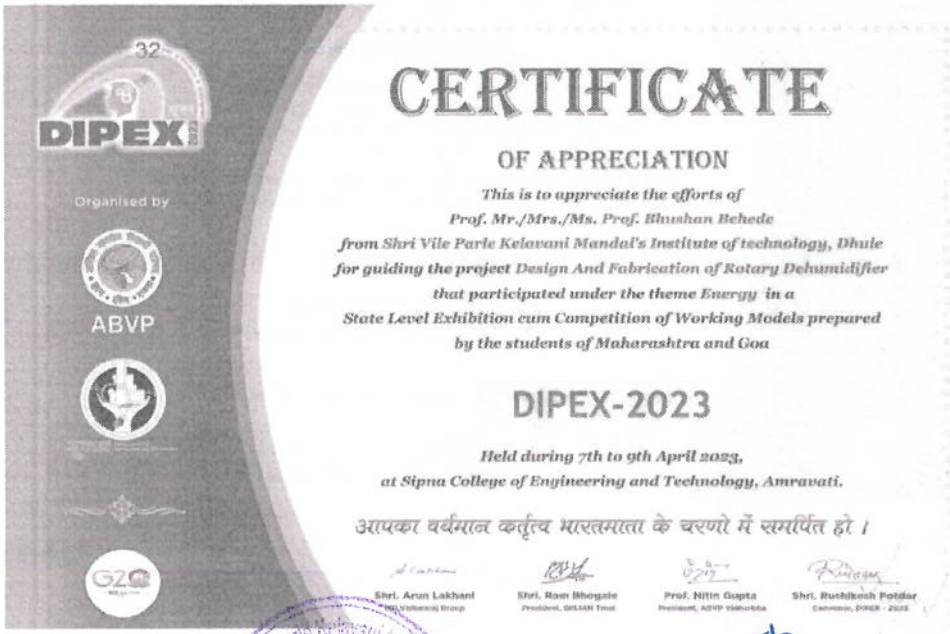
Held during 7th to 9th April 2023,
at Sipna College of Engineering and Technology, Amravati.

आपका वर्तमान कर्तृत्व भारतमाता के चरणो में समर्पित हो ।

Shri. Arun Lakhani | Shri. Ram Bhogale | Prof. Nitin Gupta | Shri. Rushikesh Potdar

Certificate of Mentor:

Mr. Bhushan C. Behede, Asst. Prof., Mechanical



32

DIPEX

Organised by

ABVP

CERTIFICATE

OF APPRECIATION

This is to appreciate the efforts of
Prof. Mr./Mrs./Ms. Prof. Bhushan Behede
from Shri Vile Parle Kelavani Mandal's Institute of technology, Dhule
for guiding the project Design And Fabrication of Rotary Dehumidifier
that participated under the theme Energy in a
State Level Exhibition cum Competition of Working Models prepared by the students of Maharashtra and Goa

DIPEX-2023

Held during 7th to 9th April 2023,
at Sipna College of Engineering and Technology, Amravati.

आपका वर्तमान कर्तृत्व भारतमाता के चरणो में समर्पित हो ।

Shri. Arun Lakhani | Shri. Ram Bhogale | Prof. Nitin Gupta | Shri. Rushikesh Potdar

BBBehede

Shri Vile Parle Kelavani Mandal's ★ DHULE ★ Institute of Technology

H.O.D. Mechanical Dept.
SVKM's Institute of Technology, Dhule

DB

Shri Vile Parle Kelavani Mandal's

Institute of Technology, Dhule

Department of Mechanical Engineering

Project Based Learning Activity Report

Project Title: Designing the multipurpose harvestor

Faculty Mentor: Prof. Diraj Bhandarkar.

Students Involved: -

1) Neha Dileep Patil
2) Prathamesh Dasharath Deore
3) Pratik Sudham Marathe
4) Saurabh Vijay Kadam

Introduction:

The multipurpose harvester is use for digging underground vegetables. It is used in single vehicle. This project helps in reducing labor cost and time consumed in harvesting, useful in multi crop farming, helpful for small scale farmer. It Surplus Yield in farming. By using this harvester farmer may have control for harvesting in his hand. It should have a huge impact on green revolution.

Objective:

1) To design Harvester which harvest the various underground vegetables.
2) To make the CAD model of conveying system Digging blade and frame.
3) To Analyse the Digging blade.
4) To Analyse the Frame of harvester.

Methodology used:

1) Literature review
2) Design CAD model
3) Vibration Analysis of Frame in Ansys
4) Stress and displacement analysis of blade.

Shri Vile Parle Kelavani Mandal's Institute of Technology DHULE

H.O.D. Mechanical Dept.
SVKM's Institute of Technology, Dhule

5) Final report.
6) Presentation of work in Avishkar 2022 completion.
7)

Start/ End Year: - Start Year – Sept 2021 - End Year –Nov 2022

Presentation of work in Avishkar 2022 Competition:

Certificate:

Dr. Babasaheb Ambedkar Technological University, Lonere

SVKM

AVISHKAR 2022

Certificate

This certificate is presented to

Pratik Marathe

for participation in **Avishkar 2022** (Research Competition)
held at *SVKM's Institute of Technology, Dhule*
on 19th November 2022.

Participation level: **UG**

Discipline: **Agriculture & Animal Husbandry**

Prof. Mayuri Kulkarni
(Institute Coordinator)

Prof. Dattatray Doifode
(Institute Coordinator)

Dr. Nilesh Salunke
Principal
SVKM IOT, Dhule

H.O.D. Mechanical Dept.
SVKM's Institute of Technology,Dhule

Dr. Babasaheb Ambedkar Technological University, Lonere

AVISHKAR 2022

Certificate

This certificate is presented to

Neha Patil

for participation in **Avishkar 2022** (Research Competition)
held at *SVKM's Institute of Technology, Dhule*
on 19th November 2022.

Participation level: **UG**

Discipline: **Agriculture & Animal Husbandry**

Prof. Mayuri Kulkarni	Prof. Dattatray Doifode	Dr. Nilesh Salunke
(Institute Coordinator)	(Institute Coordinator)	Principal SVKM IOT, Dhule

Dr. Babasaheb Ambedkar Technological University, Lonere

AVISHKAR 2022

Certificate

This certificate is presented to

Prathamesh Deore

for participation in **Avishkar 2022** (Research Competition)
held at *SVKM's Institute of Technology, Dhule*
on 19th November 2022.

Participation level: **UG**

Discipline: **Agriculture & Animal Husbandry**

Prof. Mayuri Kulkarni	Prof. Dattatray Doifode	Dr. Nilesh Salunke
(Institute Coordinator)	(Institute Coordinator)	Principal SVKM IOT, Dhule

H.O.D. Mechanical Dept.
SVKM's Institute of Technology Dhule

Dr. Babasaheb Ambedkar Technological University, Lonere

AVISHKAR 2022

Certificate

This certificate is presented to

Saurabh Kadam

for participation in **Avishkar 2022** (Research Competition)
held at *SVKM's Institute of Technology, Dhule*
on 19th November 2022.

Participation level: **UG**

Discipline: **Agriculture & Animal Husbandry**

Prof. Mayuri Kulkarni	Prof. Dattatray Doifode	Dr. Nilesh Salunke
(Institute Coordinator)	(Institute Coordinator)	Principal SVKM IOT, Dhule

Shri Vile Parle Kelavani Mandal's DHULE Institute of Technology

H.O.D. Mechanical Dept.
SVKM's Institute of Technology, Dhule

Shri Vile Parle Kelavani Mandal's
Institute of Technology, Dhule
Department of Mechanical Engineering
Project Based Learning Activity Report

Objective

Students are able to apply their technical knowledge, acquire practical skills in programming, get involved into team processes and understand real problem of society and try to provide solution by applying software engineering approaches.

Methodology Used

- Students are informed about important aspects and benefits of Project Base Learning.
- Form project groups for interested students.
- Assigned faculty mentor to project group.
- Try to understand various real problems in different domains and start analysis on them.
- Discuss various problems and start finding the solutions on problem.
- Take weekly review by mentor
- Present current work in front of department faculties after end of every semester.
- Promote project work at different technical platforms like project competitions / conferences / journals.

Sequence of Activity

- The goal of this case study is to provide details about journey of this project from second year to the final year and salient accomplishments of the team during this development, with the help of following points.
- The concept of project ***Manually Operated Cow Dung Collector*** originated from simple observation that manual collection of cow dung in large quantity in cow sheds (Goshalas), stables of horses, is very difficult and time consuming task.
- This activity also creates hygiene issues and back pain issues among the collection personnel.
- **Project Title:** Manually Operated Cow Dung Collector

- **Faculty Mentor:** Prof. Satish Patil, Dr. Hitesh Thakare.
- **Students involved in PBL:**
    1. Mr. Ganesh Dhaybar
    2. Mr. Abhishek Jain
- Start/ End Year:
- Start Year – **Sept 2018**
- End Year – **June 2021**

- **Work in Second Year (Academic Year 2018-2019): -**
    1. In 4th semester, these students created CAD model of concept of manually operated cow dung collector.
    2. Faculty members of Mechanical Engineering Department provided their inputs to improve the functionality of this conceptual device, with major emphasis on *no use of electricity* in the operation of this device.
    3. After discussion, faculties suggested that students should check for market price of such device, if available. Then, students should try to fabricate the device at lower cost to make it affordable.
    4. start to download latest IEEE or Springer papers for said domain and read it 2-3 times. Complete this activity up to November 2018.
    5. Prof. Mohd. Juneduddin, Coordinator of Computer Department appointed Prof. Satish Patil as faculty mentor for this PBL activity.
    6. Students discussed different topics or problem statements in hygiene and design domain with their mentor. Mentor suggested to find out real word data on collection frequency, duration, problems occurred, modeling software required etc.
    7. Students participated in

- **Work in Third Year (Academic Year 2020 – 21)**
- Due to ongoing Covid pandemic, students could not access CAD lab and workshop of the institute to work upon design analysis and fabrication of the prototype.
- Hence, students were advised to keep reading the research papers as well as consolidate their knowledge about Machine Design.

- **Work in Final Year (AY 2021 – 22)**
- Students took the work of design, analysis and fabrication of this device as their final year

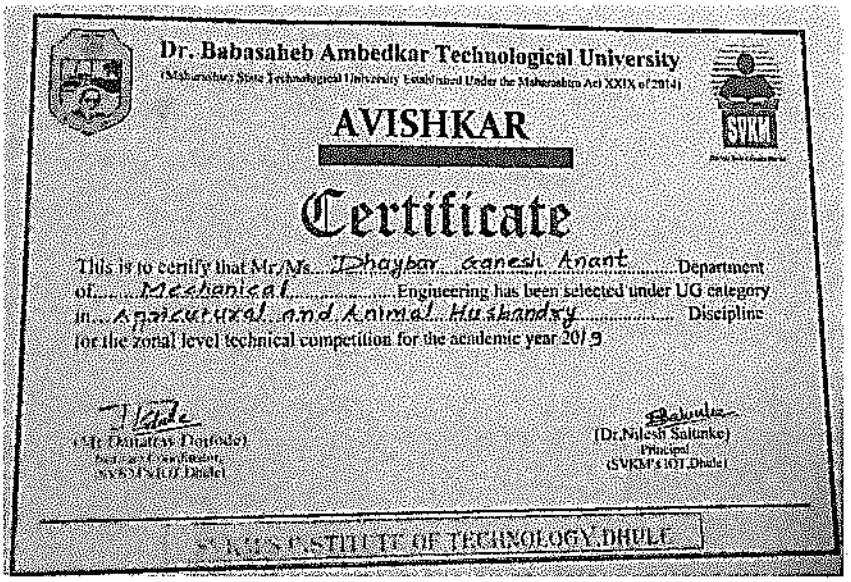
project under the guidance of Dr. Hitesh Thakare.

- Students carried out Design calculations and FEA Analysis in CAD lab of Mechanical Engineering Department.
- Once the design of the device was found to be safe, fabrication of the project was completed at a local workshop.
- Then students tested the working feasibility of this device in Goshala near the institute.

- **Salient Achievements**

- Participation in Institute Level Avishkar Project Competition organized by SVKM's Institute of Technology and DBATU Lonere, on 03rd November 2019.
- Selection of this project for Zonal Level Avishkar Project Competition 10th December 2019.
- Participation in International Conference on Futuristic Developments in Mechanical Sciences and Technology (ICFDMST 2021) 23rd – 24th December 2021.
- Placement of Abhishek Jain in Infosys Ltd. with package of 3.6 LPA.
- Placement of Ganesh Dhaybar in Asia Tech Centre Private Limited, Pune with package of 2.01 LPA.

- **Certificates**



Dr. Babasaheb Ambedkar Technological University

(Maharashtra State Technological University Established Under the Maharashtra Act XXIX of 2014)

AVISHKAR

Certificate

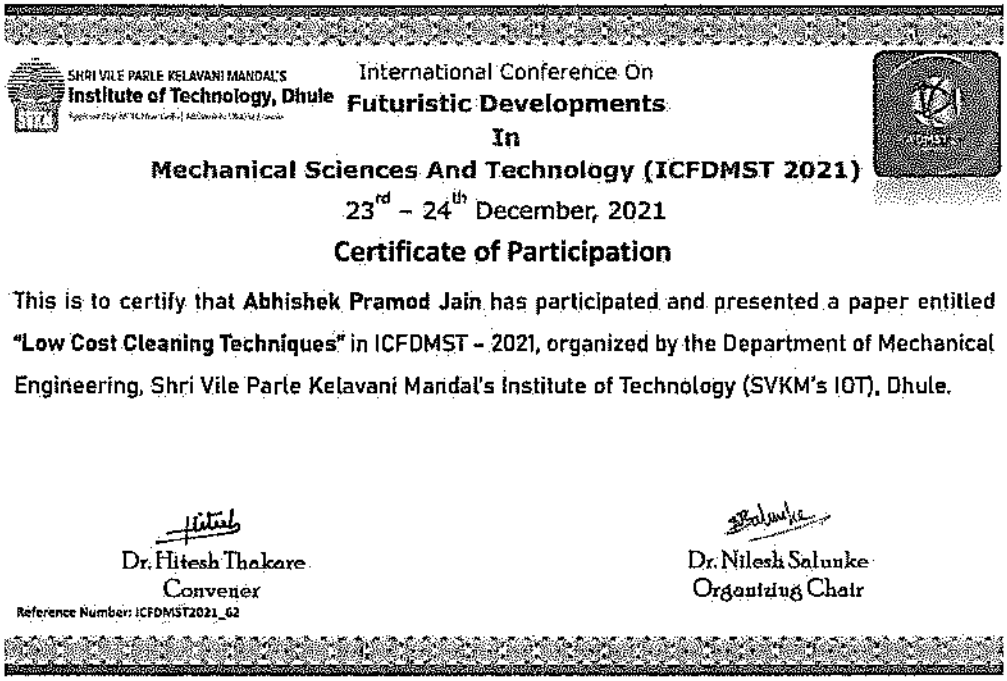
This is to certify that Mr./Ms. Dhaybar Ganesh Anant Department of Mechanical Engineering has been selected under UG category in Agricultural and Animal Husbandry Discipline for the zonal level technical competition for the academic year 2019

(Mr. Dattatrey Dorfode)
Secretary Coordinator,
(SVKM's IOT Dhule)

(Dr. Nilesh Salunke)
Principal
(SVKM's IOT, Dhule)

SVKM'S INSTITUTE OF TECHNOLOGY, DHULE

Certificate of Ganesh Dhaybar for participation in Avishkar project competition on 03rd November 2019



SHRI VILE PARLE KELAVANI MANDAL'S
Institute of Technology, Dhule

International Conference On
Futuristic Developments
In
Mechanical Sciences And Technology (ICFDMST 2021)
23rd – 24th December, 2021

Certificate of Participation

This is to certify that **Abhishek Pramod Jain** has participated and presented a paper entitled **"Low Cost Cleaning Techniques"** in ICFDMST – 2021, organized by the Department of Mechanical Engineering, Shri Vile Parle Kelavani Mandal's Institute of Technology (SVKM's IOT), Dhule.

Dr. Hitesh Thakare
Convener

Dr. Nilesh Salunke
Organizing Chair

Reference Number: ICFDMST2021_62

Certificate of Abhiskek Jain for paper presentation during ICFDMST 2021

SHRI VILE PARLE KELAVANI MANDAL'S
Institute of Technology, Dhule

International Conference On
Futuristic Developments
In
Mechanical Sciences And Technology (ICFDMST 2021)
23rd – 24th December, 2021

Certificate of Participation

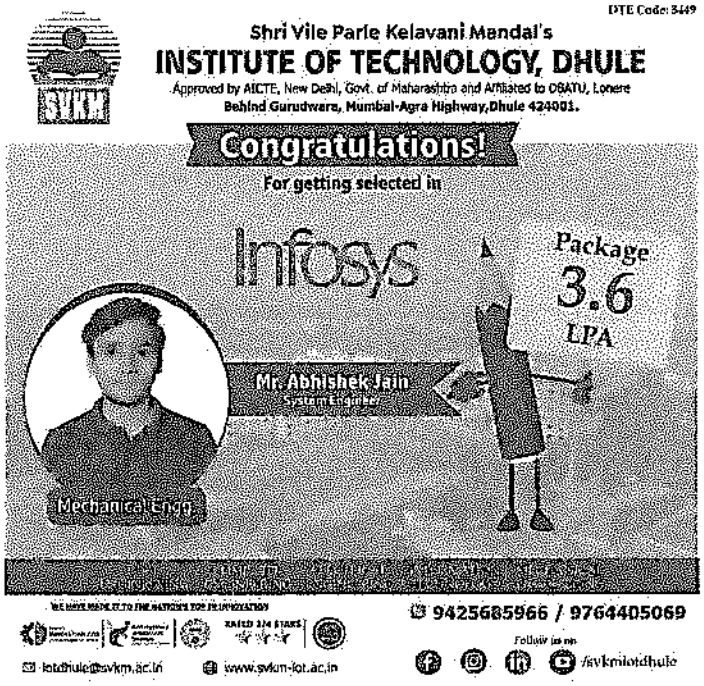
This is to certify that **Ganesh Dhaybar** has participated and presented a paper entitled **"Low Cost Cleaning Techniques"** in ICFDMST – 2021, organized by the Department of Mechanical Engineering, Shri Vile Parle Kelavani Mandal's Institute of Technology (SVKM's IOT), Dhule.

Dr. Hitesh Thakare
Convener

Dr. Nilesh Salunke
Organizing Chair

Reference Number: ICFDMST2021_63

Certificate of Ganesh Dhaybar for paper presentation during ICFDMST 2021



Placement of Abhishek Jain in Infosys with package of 3.6 LPA

Placement of Ganesh Dhaybar in Asia Tech Center with package of 2.00 LPA

Appreciation certificate received by Ganesh Dhaybar for his outstanding contribution in Tata Punch Project on 26th January 2023

Faculty Mentor **Project Guide** **Head of Department**

H.O.D. Mechanical Dept.
SVKM's Institute of Technology, Dhule