



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

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➤ **List of Seminar-Workshop-Conference on RM-IPR-Entrepreneurship**

➤ **ACADEMIC YEAR = 2018 - 2019**

Sr. No.	Name of the workshop/ seminar/ conference on Research Methodology, IPR & Entrepreneurship	Number of Participants	Date From – To	Page No.
1	Workshop on E-Yantra Farma setup activity associated with IIT, Bombay	90	7/02 to 1/06/2019	2 - 16
2	Seminar by Pre-Eureka Entrepreneurship E-Cell	45	24/09/2018	17 - 25



Date: 12/02/2019

To

The Principal,

SVKM's-Institute of Technology,

Dhule

Subject: Requirement for e-Yantra Farm Setup Initiative (eFSI)

Respected Sir,

As per the workshop attended at IIT, Bombay on e-Yantra Farm Setup initiative (eFSI), we have the following requirements:

1. Space either outdoor /indoor / terrace (minimum 150sq.ft.)
2. Drip irrigation pipes with water supply
3. Electric supply at the allotted space

We kindly request you to grant us the above mentioned needs.

Thank you.

Yours Sincerely,



Mr. Tukaram Gawali

Assistant Professor,

Department of Computer Engg. and Information Technology

Mob: 9422497167, 9309777250

Email: tukaram.gawali@svkm.ac.in
t.gawali@gmail.com



12/02/19

Kind request to consider. Thank you!

Forwarded to


Shri. Ishwar Patil Sir.

Plz. do the needful

Balukhe
12-2-19



Patil
show please
as per discussion.



Event No-03
e-Yantra Farm Setup Initiative (efsi)
(Project)

SVKM's Institute of Technology , Dhule has taken initiative for e-Yantra Farm Setup Initiative(eFSI) along with IIT-Bombay. Our Principal Dr. Nilesh Salunke and our Co-ordinator Prof. Khalid Alfatami are supporting all the activity inside our campus. Our initiative is mainly focusing on the development of smart and automated systems which can be used to solve modern day agricultural problems. Moreover, it emphasizes on the application of normal concepts of electronics towards day to day problems and implementation of real time solutions for such problems. The students are provided with a dedicated area for implementing their own embedded systems and prototypes and develop new agricultural solutions. The setup includes a miniature farm which acts as a seed bed and where students can grow plants and do their studies on different agricultural aspects as well as gain brief knowledge about this field also. This provides them real time exposure in the area and give them a chance for real time analysis for both the problem and their proposed solution.

We have completed 2 Tasks till date

Task 1

In task 1, we have allocated 150 sq. ft. space for placing trough and start sowing seeds.

After allocation of space we have started by sowing seeds on farm bed, and also started the process of creating Amrit Mitti and Amrit Jal.

After this the maintenance of the farm is taken by providing proper water.

Task 2

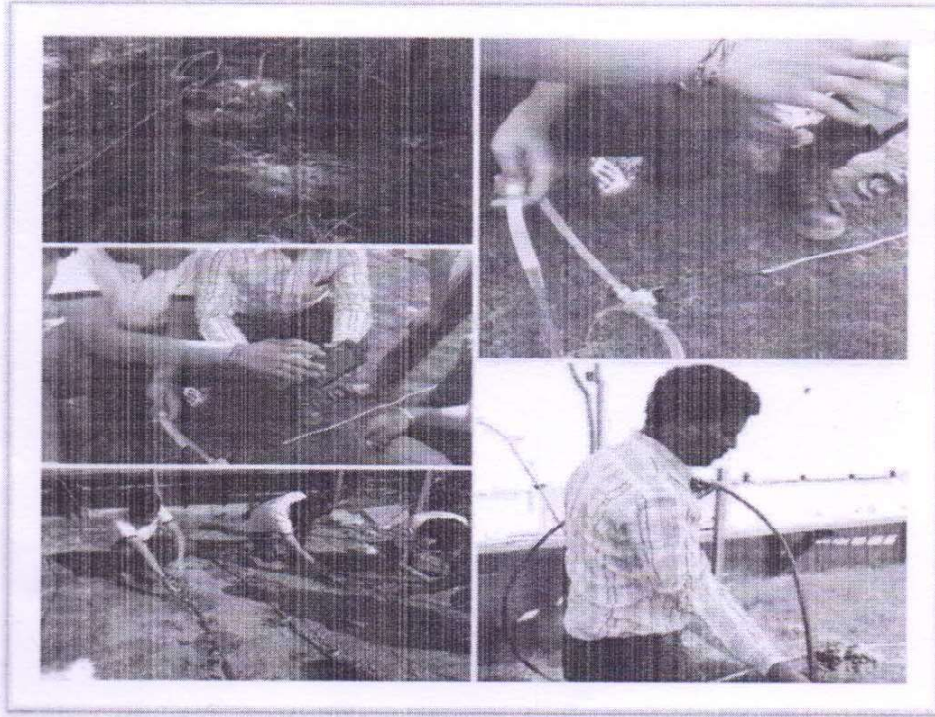
In task 2, to get the farm bed fed and watered we get our water valve and esp8266 and configured eFSI Team Registered at IIT Bombay

Faculty Coordinator: Mr. Tukaram Gawali (Assistant Professor)

Student Names: Mr. Ansari Ali Arsalan (SYIT)
 Mr. Vivek Khairnar (SYIT)
 Mr. Sanket Chaudhary (SYCO)
 Mr. Krushna Baviskar (SYCO)



Evidence of Program



E-yantra Team

← → 🔒 Not secure | efsle-yantra.org/teamprofiledetail

KYANTRA DASHBOARD Logout

t.gawali@gmail.com

- Add Team Members
- Team Profile
- Tasks Progress
- Task 1
- Task 2

Faculty Profile

Team Id	Full Name	Email	Contact	Designation	Edit
102	Tukaram K. Gawali	t.gawali@gmail.com	9422497167	Assistant Professor	

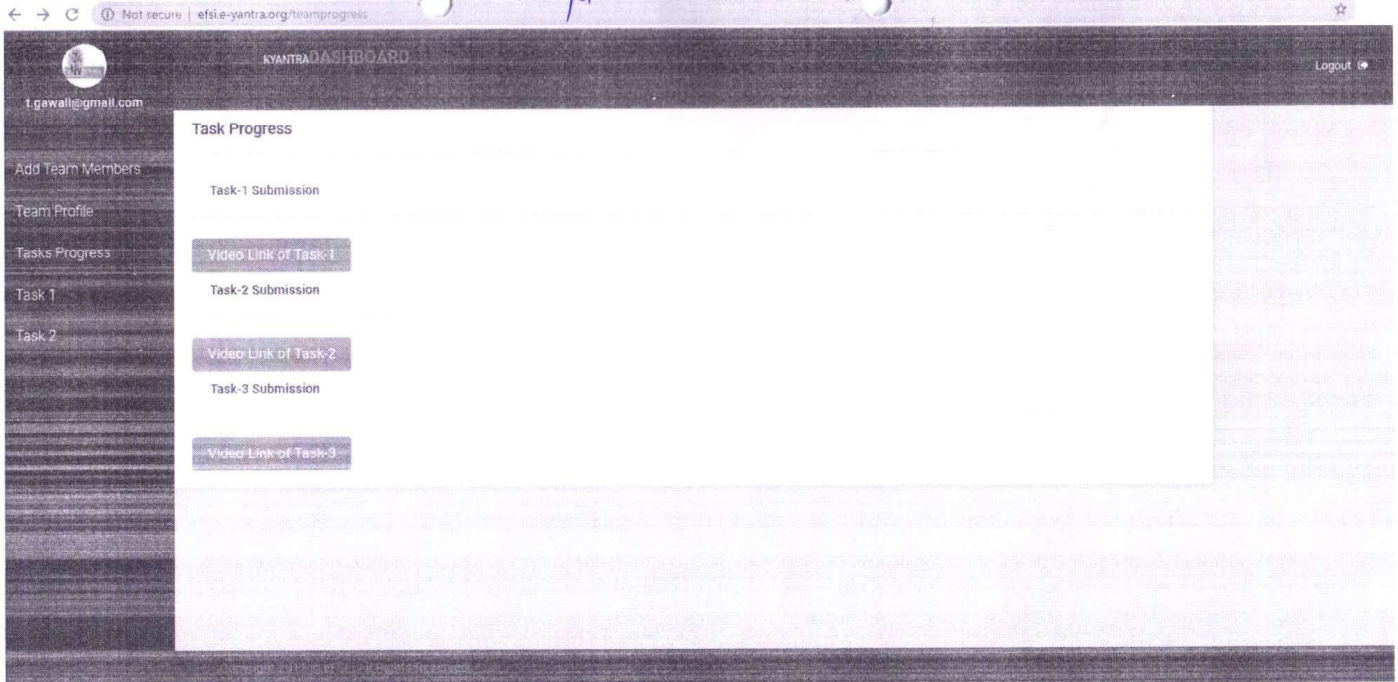
Student Profile

Id	Team Id	Full Name	Email	Contact	Year	Edit
54	21	Sanket Kishor Chaudhari	sanket22499@gmail.com	9665621067	2	
55	21	Ansari Ali Arsalan Ali Imran	alifardan1620@gmail.com	9423424553	2	
56	21	Vivek Arvind Khairnar	khairnarviveka@gmail.com	9421460754	2	
57	21	Krushna Hemraj Baviskar	krushnabaviskar@gmail.com	9049630830	2	

E-yantra Team



E-yantra submission



E-yantra Submission



Task - 1

Congratulations to your college on initiating an agriculture test bed through the e-Yantra Farm Setup Initiative (eFSI)

Aim of eFSI:

This initiative aims at assisting eLSI colleges in setting up an automated agriculture project testbed to address real world problem and hands-on learning for students to apply theory in a fun and productive manner.

e-Yantra transfers the requisite knowledge to setup this test bed and once setup, this testbed will serve as a base for interesting BE projects in the field of Embedded Systems and Robotics.

In order to start applying technology to the farm, we need to setup the 150 sq ft farm.

Depending on the type of space available, you may set up your experimental farm either

- In an open space in your college premises
- In a closed area such as Greenhouse facility - in case your college already has one (you will require troughs in this case)
- On a terrace (you will require troughs in this case)

To help you in setting up the farm we have come up with different Checkpoints. They are as follows:

1. **Identifying 150 sq ft space for placing the troughs**
2. **Laying troughs and irrigation system**
3. **Preparing amrit mitthi and amrit jal**
4. **Sowing of seeds**

Checkpoint 0 - Allocation of space

The first step is to identify a group consisting of one faculty and four students(Two - 2nd yr and Two 3rd yr student). You can have more than one group. Once the groups are ready you need to have 150 sq ft space for placing trough and start sowing seeds.

Checkpoint evaluation

The evaluation of this checkpoint will be based on uploading photo/video on the portal, which will also have the group members.

Checkpoint 1 - Trough, Irrigation and Composting

On completion of checkpoint-0, you can now start preparing for sowing. The following steps needs to be followed to complete this Checkpoint

Trough making and laying irrigation system



Task - 1

- Step 1:** Cut a sheet of length 100cm from the HDPE roll.
- Step 2:** There are two crease marks on either sides of the sheet along the length. These are used to fold the sheet along the its length. We will make two crease marks along its breadth at a distance of 20 cm each from the edges. These will be used to fold the sheet.
- Step 3:** Make four crease marks in each corner at an angle of 45 degrees.
- Step 4:** Make two 8mm holes using a drill machine at a distance of 10 cm from the center on either sides and at distance of 5cm from the edge of the sheet. Repeat this on the other side of the sheet.
- Step 5:** Fold the sheet along the crease marks to form a rectangular open box
- Step 6:** Staple the sheets on all four sides using a 26/6 stapler.
- Step 7:** Place the trough and fill with growing medium.
- Step 8:** Lay the drip irrigation pipe/tape.
- Step 9:** Connect all the irrigation pipes to main water supply pipe.

Amrit Mitti

Steps of making is spread across different days,

Day 1

- Create thick liquid slurry with 1 kg fresh cow dung, 1lt cow urine, 100gm jaggery
- Add the mixed slurry into 10 liter of water
- Stir the 11 liter slurry with a stick in clockwise direction (12 times), then in anti-clockwise direction (12 times). Follow the same process of stirring of the 10 L slurry 3 times a day for the next 3 days.

Day 2

- Stir the 11 liter slurry with a stick in clockwise direction (12 times), then in anti-clockwise direction (12 times) 3 times a day.

Day 3

- Stir the 11 liter slurry with a stick in clockwise direction (12 times), then in anti-clockwise direction (12 times) 3 times a day.

Day 4

- Dilute 11 liters of slurry into 100 liters of water which will create 111 liters of Amrut Jal.
- Mix 20 kg biomass into Amrut Jal and keep it standing for 24 hrs

Day 5

- Create Heap: 3 feet wide and 1 feet high from wet biomass
- Create the heap using layers of Biomass, soil and rock-dust (incase soil is less pores)
- The layer are added as follows
 - ◆ Layer 1 - Biomass
 - ◆ Layer 2: Soil
 - ◆ Repeat layer 1 & 2 up till layer 11
 - ◆ Layer 12: Rockdust
 - ◆ Apply pressure across heap every 10th layer of biomass
 - ◆ Continue the above layering until you reach 1 feet
- In all there will be approximately 60 layers.

Day 12



- Turn the heap twice a week and spray Amrut jal to maintain moisture inside the heap. It can be reduced to once in every 7 days in case of shortage of manpower or time add amrut jal and water to keep the heap moist.

Day 19

- Turn the heap add amrut jal and water to keep the heap moist.

Day 26

- Turn the heap add amrut jal and water to keep the heap moist.

Day 31

- Add one layer of soil - approximately 2 inches
- Sow the seeds
- Top the seeds with mulch heap with biomass to protect the seeds from birds.

Day 55 (21 Days after germination)

- Pruning of 25% leaves

Day 76 (42 Days after germination)

- Pruning of 25% leaves

Day 97 (63 Days after germination)

- Some plants may start flowering, cut all plants 0.5inch from soil and cut stem into 3-4 inch and keep it on heap for 3-4 days for drying

Day 101

- Turn the heap and mix biomass
- Sprinkle Amrut Jal on heap, keep it for 30 days

Day 108

- Turn heap every 7 days for the next **ONE MONTH** and add amrut jal to keep the heap moist.

Checkpoint evaluation

The checkpoint will be considered complete when the troughs with growing medium and irrigation system are laid, and amrit mitti process has started. You need to upload photos/video on the portal for evaluation.

Checkpoint 2 - Sowing the seeds

For this checkpoint we will sow spinach as an example

Step 1: Soak spinach seed in water/amrit jal for 3 to 4 hrs.

Step 2: Turn bed to loosen soil for aeration.

Step 3: Spread the soil evenly in trough.

Step 4: Sow the soaked seeds, such that they are 2 inches apart and 0.5 cm deep.

Step 5: Sprinkle water so that the soil remain moist to aid germination.

Step 6: Sprinkle water as and when needed.

Checkpoint evaluation

The checkpoint will be considered complete when all the troughs in the 150 sq ft space has growing plants. You need to upload photos/video on the portal for evaluation.



Note: To help further, we will be providing video tutorials which will clearly demonstrate the complete process



Setup for Task 2

Outline: This is a prerequisite for **Task 2 - Automating irrigation system**. In this task we get our Raspberry PI up and running to get started with Task-2. To complete this task the following components are required, and to aid in the completion of the task, step-by-step instructions are provided, along with necessary tutorials.

Components required:

- Raspberry Pi 3 (RPI)

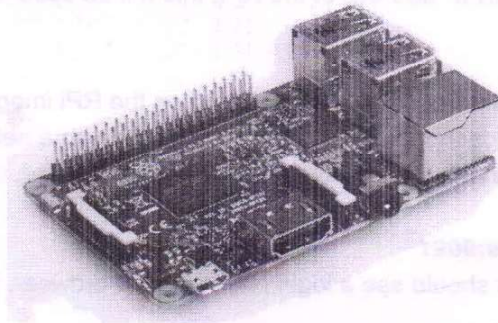


Figure 1 : Raspberry Pi 3

- SD card (image provided online)
- LAN cable
- Wireless Router (If wireless network is not available)

1. Setting up RPi Internet of things (IoT) Dashboard (Checkpoint 1)

- Burn provided Raspbian OS on SD card using this tutorial ([Linux](#), [Windows](#))
- Power on RPi and use the LAN cable to connect RPi with desktop/laptop
- RPi has two interfacing modes for accessing internet, one is through wired ethernet port and another one is through WiFi. Due to this RPi will have two addresses corresponding to two interfaces.
- By default, the wired LAN IP address of RPi is set to be **192.168.0.100**
- To communicate with RPi, we need to configure your desktop/laptop LAN settings
- SSH ([Linux](#), [Windows](#)) into RPi using LAN IP to enable connection with WiFi network
- Set SSID and password of the WiFi router with which RPi connects
 - We need to navigate to `/etc/wpa_supplicant` on RPi
 - Here you will find `wpa_supplicant.conf` if the file does not exist type:
 - `touch wpa_supplicant.conf`
 - Make changes to `wpa_supplicant.conf` using a suitable editor so that it looks like this:

```
ctrl_interface=DIR=/var/run/wpa_supplicant GROUP=netdev
update_config=1
country=GB
```

```
network1={
    ssid="Your first router SSID"
    psk="Password for first router"
    key_mgmt=WPA-PSK
}
```



```
network2={
    ssid="Your second router SSID"
    psk="Password for second router"
    key_mgmt=WPA-PSK
}
```

- Restart RPi to apply changes

2. Setting WiFi router

- Find the IP address of RPi from the router web interface
- Reserve IP address of RPi for setting static IP (**If help required please contact your system admin**)
- Note down the wireless LAN IP address of the RPi, this will be used for your future reference.

3. Launching RPi server

- There is already installed and running IoT dashboard on the RPi image provided to you.
- **Important:** To access the dashboard you need to be on the same network as the RPi.
- On your Desktop/Laptop on the same network, type on the browser, the IP address of RPi with port 9091
 - eg: `rpi_ip_address:9091`
- If everything went well you should see a login page on your browser, and use the following credentials to login:
 - Login: `efsi@e-yantra.org`
 - Password: `Efsi@2017`

The task is considered complete when e-Yantra receives screenshots of the setup and the browser after your logging into the IoT dashboard.

On completion of this task the college receives *two valves*, to automate their irrigation system, the procedure to automate is issued as part of Task-2

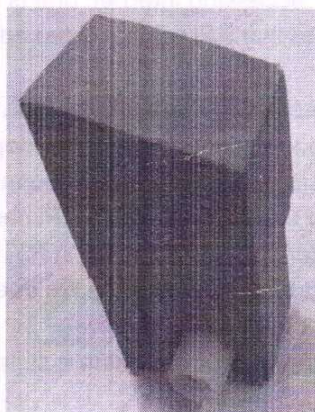
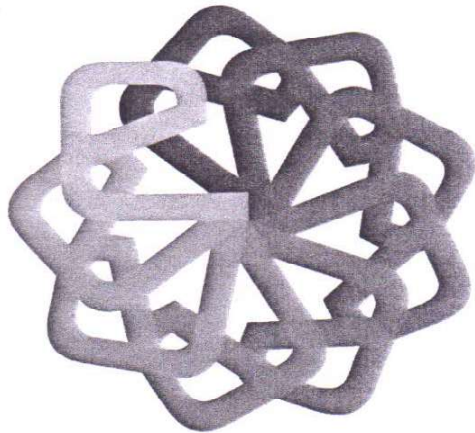


Figure 2 : wireless valve





ERTS Lab
 Department of Computer Science and Engineering
 Indian Institute of Technology Bombay
 Powai, Mumbai-400 076



Certificate of Participation

This is to certify that *Tukaram K. Gawali* from *Shri Vile Parle Kelavani Mandal's Institute Of Technology, Dhule* has successfully participated in the three-day workshop on “Advanced Topics in Embedded Systems and Robotics (Python and IoT)” conducted from *February 7, 2019 to February 9, 2019* held at *Indian Institute of Technology Bombay*.

Prof. Kavi Arya
 Principal Investigator, e-Yantra
 Professor
 Department of Computer Science and Engineering
 Indian Institute of Technology Bombay



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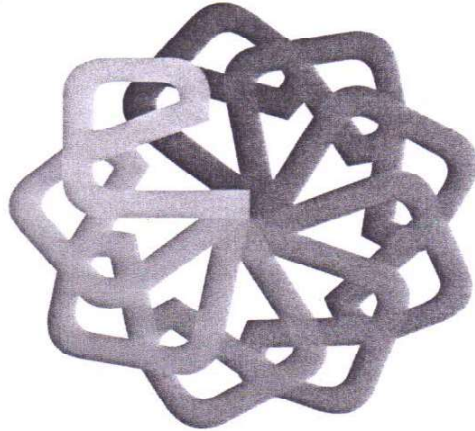
Engineering a better tomorrow



e-Yantra is a project sponsored by MHRD, Government of India, under the National Mission on Education through ICT (NMEICT).



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Indian Institute of Technology Bombay
Powai, Mumbai-400 076



Certificate of Participation

This is to certify that **Gaurav B. Patil** from *Shri Vile Parle Kelavani Mandal's Institute Of Technology, Dhule* has successfully participated in the three-day workshop on “Advanced Topics in Embedded Systems and Robotics (Python and IoT)” conducted from *February 7, 2019 to February 9, 2019* held at *Indian Institute of Technology Bombay*.

Prof. Kavi Arya
Principal Investigator, e-Yantra
Professor
Department of Computer Science and Engineering
Indian Institute of Technology Bombay



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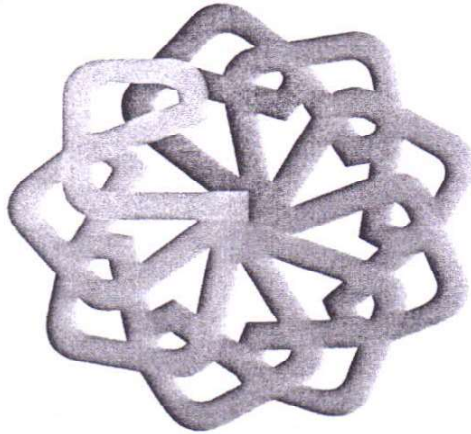
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Engineering a better tomorrow





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Indian Institute of Technology Bombay
Powai, Mumbai-400 076



eYantra

Engineering a better tomorrow

Certificate of Participation

This is to certify that *Chaudhari Sanket Kishor*, a student from *Shri Vile Parle Kelavani Mandal's Institute Of Technology, Dhule, Dhule* has successfully participated in the three-day workshop on “Advanced Topics in Embedded Systems and Robotics (Python and IoT)” conducted from *February 7, 2019* to *February 9, 2019* held at *Indian Institute of Technology Bombay*.

Prof. Kavi Arya
Principal Investigator, e-Yantra
Professor
Department of Computer Science and Engineering
Indian Institute of Technology Bombay



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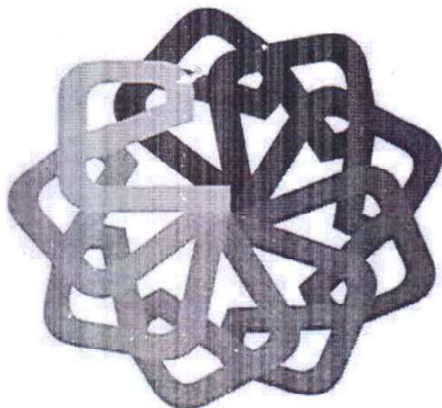
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eYantra

Engineering a better tomorrow

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Indian Institute of Technology Bombay
Powai, Mumbai-400 076



Certificate of Participation

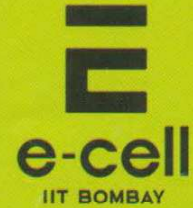
This is to certify that *Ansari Ali Arsalan Ali Imran*, a student from *Shri Vile Parle Kelavani Mandal's Institute Of Technology, Dhule, Dhule* has successfully participated in the three-day workshop on "Advanced Topics in Embedded Systems and Robotics (Python and IoT)" conducted from *February 7, 2019* to *February 9, 2019* held at *Indian Institute of Technology Bombay*.

Prof. Kavi Arya
Principal Investigator, e-Yantra
Professor
Department of Computer Science and Engineering
Indian Institute of Technology Bombay



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e-Yantra is a project sponsored by MHRD, Government of India, under the National Mission on Education through ICT (NMEICT).



• THE LONGER IT
TAKES TO DEVELOP,
THE LESS LIKELY
IT IS TO LAUNCH

-Jason Fried

Workshop
Contact info:-

Manish Patil.
94210 40344



SO START TODAY WITH



Registration of Illuminate (Pre-Eureka) Workshop

INSTITUTE OF TECHNOLOGY (IOT)

CIVIL SUKUM

Sr.No	Name	College	Contact	Sign
01	Prasad Bhamare	Civil		
02	Devesh Gindodiya	Civil		
03	Pritesh Patil	Civil	8275266742	[Signature]
04	Jaykumar Patil	u	9890241938	[Signature]
05	Himanshu M. Nashikkar	u	7798534399	[Signature]
06	Patil Himanshu R.	u	9665406687	[Signature]
07	Agarwal Kartik	u		
08	Khan Abdul Hafeez	u		
09	Nadeem Ansari	u		
10	Mazathe Sakshi	u		
			4000 /-	
1.	Bhagyashree Patil.		} 1200 /-	
2.	Mayuri Patil			
3.	Jayesh Patil.			
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Reading
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Signature
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13



① Name:- Vaçun R. Sveyawanshi.
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Pin code:- 424005.

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4] Name :- Teale Durgesh Namendra.
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Add - 59, Utkarsh colony, golibar tekdi, Dhule.
424001.

8] Name - Rahul S Sharma

mail id - rahul.sanjay.sharma01@gmail.com

mob. no - 9423217276

Add - 3047/A, Panch Kandil, Agra road, Dhule: 424001

a] Name - Marathe Sakshi Hemant

e-mail id = marathe.sakshi789@gmail.com

Mb: 9421617789

Add: Plot no: 10, Krishi Nagar, Jamnagari Road,
Dhule - 424001.



DETAILS

FACULTY COORDINATOR


Name - Khalid Alfatmi
Mobile - 9657724096
E-mail - Khalid.alfatmi@sukm.ac.in

COLLEGE AMBASSADOR/STUDENT INCHARGE

Name - Manish Sunil Patil
Mobile - 9421040344
E-mail - mnprado875@gmail.com
Event Date - 24 September Event Time - 12pm to 6pm

We are hereby willing to organise **Pre-Eureka Entrepreneurship** workshop conducted by ECell, IIT Bombay. We have agreed to requirements, schedule and fees of the program.
College Stamp


Signature of Faculty Coordinator


Signature of Student Coordinator

Kindly send the scanned copy to navoj@ecell.in



**THE
ENTREPRENEURSHIP
CELL**
IIT BOMBAY

📍 Student Activity Centre (SAC), IIT Bombay, Mumbai, India
☎ +91 22 2576 4044
✉ ecell@iitb.ac.in

Illuminate(Pre-Eureka!) WORKSHOP

- The aim of the workshops is to create awareness about the intricacies related to Entrepreneurship, scripting a B-Model, Marketing and Finance among college students
 - These are one day workshops with having **5-6 hours of session** from 1PM to 6PM (preferably)
 - E-Cell, IIT Bombay will not pay any cost for venue, the hosting institute will provide the venue and the requirement about venue is given in the Proposal
 - Workshop fee is **INR 400** only per student (inclusive of service tax) and the college will ensure a minimum of **100+** participants
 - A **certificate of appreciation** will be given to the Faculty Coordinator for successful coordination, and **certificate of participation** to all students who participate
- *The complete details about fees, requirements and schedule is given in the proposal PPT.
Kindly go through the proposal.

CONFIRMATION LETTER

COLLEGE NAME

S.V.K.M's Institute of Technology, Dhule

Postal Address

Behind Gurdwara, Mumbai - Agra Highway

Dhule

Pin Code 424 001



College Stamp

Signature of Faculty Coordinator

Signature of Student Coordinator



THE
ENTREPRENEURSHIP
CELL

IIT BOMBAY

- 📍 Student Activity Centre (SAC), IIT Bombay, Mumbai, India
- ☎ +91 22 2576 4044
- ✉ ecell@iitb.ac.in