



## **Internet of Things with Rasberry Pi**

- **Workshop Date: 5<sup>th</sup> – 6<sup>th</sup> March 2018 (2 days)**
- **Fees: 650/- per participant (Non Refundable)**
- **Venue: G.C.O.E., Jalgaon**
- **Certificate of Participation will be given to all participants.**  
(Only if participant is present on both days)
- **Team of 4 student required.**  
(It is advised that student form their own team, or else organizer will randomly form team of 4 students.)
- **Kits will be provided in group of four students. Kits will be taken back after workshop.**
- **Interested participant/group can buys kit by paying on spot.**
- **Each Team should bring their own LAPTOP. Charging points will be provided.**

### ➤ **Introduction to IoT & Raspberry\_Pi**

- What is Raspberry\_Pi?
- Historical Background, Features, Applications & Scope
- Raspberry\_Pi & its Various OS
- Introduction to Raspbian
- Distributing Software and student material

### ➤ **Basics of Python Programming**

- Features of Command Window & Script Window
- Basic Python Commands & Keyboard Shortcuts
- Defining Editing and Clearing Variables & Checking for Existence
- My First Python Program

### ➤ **High Level Programming and its Easy Interaction**

- Introduction to Arrays
- Python Data Types and Basic I/O operations
- Various Python Functions & their use
- Creating & running User defined Functions





# TECHNO-ARENA 2K18 WORKSHOP

5<sup>th</sup>-6<sup>th</sup> March, 2018



**GOVERNMENT College of ENGINEERING, Jalgaon**  
(AN AUTONOMOUS INSTITUTE of GOVERNMENT of MAHARASHTRA)

- Conditional Statements and Looping
- Project :- ATM Machine Prototype

## ➤ **Getting Started with Raspberry\_Pi**

- Raspbian – A Debian Derivative
- The Concept of Open Source
- Disk Fragmentation
- Installing & Starting Raspberry\_Pi
- Understanding the Raspberry\_Pi Desktop Layout
- Command Window (Terminal), Editor Window, Workspace, Command History, Graphic Window

## ➤ **IoT & Its Implementation**

- Introducing IOT
- What is IOT?
- What are the features & scope of using IOT?
- Uses of IOT
- CLI and GUI format of interaction
- Application Area / Companies promoting/working in IoT
- Controlling I/O's
- Accessing GPIO Pins

## ➤ **Programming on Raspberry\_Pi**

- Glowing multiple different pattern LED
- Interfacing Relays with Raspberry\_Pi
- Local time frame based automation
- Project: IoT Based Secure Home/Office Automation
- Project: IoT Controlling through Smart Phone over Wifi
- Worldwide Accessing and controlling of IoT over Internet
- Concept and scope of IoT hacking
- Demonstration/ Explanation of IoT hacking

For any further info:

Coordinator: Sachchak Waghmare (7620558850)

Co-coordinator: Uday Devikar - IOT & RasPi(80874 36966)

Website: <https://technoarena.gcoej.ac.in/workshop>



<http://technoarena.gcoej.ac.in>



<https://www.facebook.com/technoarena>



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### **Techno-Arena Cell**

Government College of Engineering, Jalgaon  
Opposite to Government ITI  
National Highway 6, Jalgaon



## **WORKSHOP RULEBOOK**

1. Fees for each workshop is **650/- INR** per participant, which once paid is non-refundable.
2. It is compulsory for all participants to bring their college ID card during workshop.
3. For **AI & Machine learning** workshop participant must bring his own laptop. College will NOT provide any computer system. Only charging points will be provided.
4. For **IoT workshop** kits will be provided in group of 4 participant. It is advised that participant form their own group, if not organizers will form group at random. Kits will only be provided for duration of workshop and taken back after workshop. Interested group/participant can buy kit on spot.
5. For **IoT workshop** each group must have atleast one laptop in their group. College will not provide any computer system. Only charging points will be provided.
6. Participants will have to report at sharp 7.30 am on 5<sup>th</sup> March 2018 for workshop registration. Workshop will start from 8:00 am.
7. Snacks & Tea will be provided during break.
8. Hospitality (accommodation + dinner) will be provided to participant in college student's hostel on payment of nominal fees. For more details contact Hospitality Team.
9. Certificate will be provided to only those candidates who will attend the workshop for complete two days.
10. Organizers reserve the right to cancel any workshop at any moment and modify any rule without prior notice. Organizers decision will be final and binding to all participants.

For any further info: Coordinator: Sachchak Waghmare (7620558850)

Co-coordinator: Akash Bhosale - Automotive Mechanics (7798679796)

Co-coordinator: Aditya Rokade - AI & M/C Learning (7767023353)

Co-coordinator: Uday Devikar - IOT & RasPi (80874 36966)

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