Registration Form

Faculty Development Program
(Offline mode)
On

IoT End-to-End System Design

Veermata Jijabai Technological Institute
Mumbai, India.

(13th Feb - 17th Feb 2023)

NAME of PARTICIPANT: _____

DESIGNATION: _____

NAME of THE ORGANIZATION:

ADDRESS: _____

MOBILE No.: _____

EMAIL ID: _____

DATE: _____

Seal & Signature of Sponsoring Authority

Topics Covered

- Overview of IOT fundamentals, Cloud, Dashboards, case studies.
- Project creation using TI CCS and running the code on the target.
- Learn to use GPIO on the MSP432 Launch pad.
- ADC foundations with SAR ADC operation.
- Connect a sensor to the analog channel.
- Calibrate the sensor
- Use the TI CC3100 Wi-Fi module along with the Launch pad board.
- Learn to use Energia to configure the Wi-Fi module.
- Install Node.js and Node-Red programming language on your local machine.
- Learn the fundamentals of Node-RED programming language.
- MQTT protocol basic concepts. Use MQTT protocol to communicate with the cloud.
- Create an account on the Cloud.
- Configure the Node-RED programming language on the cloud.
- Program on the cloud using Node-RED programming language.
- Send sensor reading to the cloud.
- Create a Dashboard on the cloud and send sensor reading to the Dashboard.
- Control the LED's on the board through the Dashboard on the cloud.

Registration Procedure

Course fee towards registration for different categories:
Rs 5000/- : for faculty
Rs 6000/- : for Industry
Rs 1500/- : for UG/PG/Research Students

Note: Participants are required to carry their own laptops with Windows 10 or above version for hands on sessions.

Last date for registration: 12th Feb 2023.

There will be a separate link for registration and payment of fees.

After payment through SBI collect, use following link to upload payment receipt:

https://forms.gle/4YJHFjWXjLoi6DkD8

Faculty Development Program On

Internet of Things

End-to-End System Design

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Organized by

Department of Electrical Engineering
Veermata Jijabai Technological Institute Mumbai, Maharashtra – 400019

About VJTI

Veermata Jijabai Technological Institute (VJTI) was established in 1887. In 1913, the Institute was recognized by then Government of Bombay as the Central Technological Institute, Bombay Province. Since the time of inception, VJTI has been playing a very vital role in producing quality engineers, introducing new programmes and electives in emerging areas.

VJTI has pioneered India's Engineering education, research and training ecosystem. Pre-independence, VJTI had been instrumental in driving industrial growth throughout united India. Post-independence, VJTI played a pivotal role in setting up IITs and RECs of India and strengthened technology excellence of country. Prof. P.K. Kelkar who was founding Director of IIT Kanpur and planning officer of IIT Bombay was the Head of the Electrical Department, VJTI from 1943 to 1956. He was instrumental in introducing UG and PG programs in Electrical Engineering at VJTI.

The institute was granted financial and academic autonomy from June 21, 2004. The Institute is reputed for excellent training in Engineering and Technology at Diploma, Degree, Post Graduate levels and Research. Presently VJTI offers B. Tech programmes in nine core disciplines of engineering, 17 M. Tech. programmes, M.C.A. and PhD programmes in various engineering disciplines. The Institute is affiliated to University of Mumbai. It was one of the institutes selected by the Central Government for further development with grant-in-aid from the Centre under Technical Education Quality Improvement Programme (TEQIP- II and III). VJTI has recently established DST approved Technology Business Incubator for deep-tech startups.

About Speakers & Participants:

Speakers: Eminent speakers from IIT, Bombay and Experts from reputed organizations / industries will deliver the lectures.

Target Participants: Faculty members, Industrialists, Post-doc fellows, Research Scholars, PG and UG Students.

Patron

Dr. S.G.Bhirud, (Incharge Director, VJTI)

Advisory Committee

Dr. R.N. Awale, (Registrar)
Dr. S.P. Borkar, (Dean Administration)
Dr. K.K. Sangle, (Dean Academics)
Dr. Faruk Kazi (Dean R&D)
Dr. V. M. Phalle (QIP coordinator)
Dr. N.P. Gulhane (TPO)

Resource persons

Faculties from IIT Bombay, Industry experts

Coordinator

Dr. S. J. Bhosale (HOD, Electrical Engineering Department)

Co-Coordinator

Dr. D. P.Rathod
+919819003515
dprathod@el.vjti.ac.in

Organizing committee

Dr. Shweta Ghodeswar, +919969043053
sbghodeswar@ee.vjti.ac.in
Prof. Bharati Bhirud, +919833399753
bnbhirud@el.vjti.ac.in
Prof. Mithileshkumar Yadav, +917303323233
mryadav@ee.vjti.ac.in
Ahire Harshwardhan : + 917977868342
Nilashree Wankhede : +918369353521
Utkarsha Gaikwad : +919422357080

FDP Objectives

The potential of IOT is not just in enabling billions of devices simultaneously but leveraging the huge volumes of actionable data which can automate diverse business processes. Today devices need to be controlled remotely using the internet. The IOT space is dominated by resource constrained devices that act as nodes for collecting the data from the surroundings. Programming of such systems requires C-programming expertise along with Cloud technologies Web technologies and AI. This program covers Firmware programming using 'C' programming language , sensor interfacing , sensor calibration using ML technique, ,internet connectivity using Wi-Fi interface, Cloud programming using Node-Red programming language for setting up the MQTT communication protocol and for dashboard creation. Data communication from the sensor node to the cloud and vice versa would be covered by creating an end to end application. Participants will learn Cloud technology, JavaScript, Embedded C and Linear regression to calibrate the sensor node and embedded systems programming during the 5-day hands-on-session. Participants of this program will understand all the key technologies needed to build such systems as expertise from various domains like Cloud, IT, Electronics and Communication with Machine learning is needed to implement such an IOT based system.

Participation Certificate

Participants who attend the program with minimum 70% attendance would be issued Certificates by organizers. Limited seats are available. No accommodation facilities are available for participants.