# FDP

# on

# "Industrial IOT"

# 22-02-2022

# to

# 28-02-2022

# A one-week Faculty Development Program on

## "Industrial Internet of Things"

### From 7<sup>th</sup>–12<sup>th</sup> FEB 2022

Dept. of E. C. E

**(As a part of MOU Activity)**

**In Association with**

TechFLUENT

HYDERABAD-500068
+91-40-24228229

---

**CHIEF PATRON:**
Prof. K. Chandra Sekhar Naidu.
Chairman, VEMU IT.
**PATRON:**
Dr. K. Naveen Kilari, Principal, VEMU IT.
**CONVENER:**
Dr. S. Muni Rathnam, HOD-ECE, VEMU IT.
**COORDINATOR:**
Mrs. R. Sindhu, Asst.Prof. in ECE, VEMU IT.

**ORGANISING COMMITTEE:**
- Dr. G. Elaiyaraja, Professor
- Dr S. Muralimohan, Professor
- Mr. G. Sankarappa, Associate Professor
- Mr. N. Prakash Babu, Associate Professor
- Mrs. K. Jaya Sree, Associate Professor
- Mrs. R. Rani, Associate Professor
- Mr. Y. Mahesh, Associate Professor
- Mr. N. Kiran Kumar, Associate Professor
- Mrs. A. Kusuma kumari, Associate Professor
- Mrs. P. Tejaswini, Assistant Professor
- Mrs. D. Reena, Assistant Professor
- Mrs. J.V. Pesha, Assistant Professor
- Mrs. M. Bhargavi, Assistant Professor
- Mr. T. K. Kalaiarasan, Assistant Professor
- Mr. P. Vemaiah, Assistant Professor
- Mrs. P. Sirisha, Assistant Professor
- Ms. V. Bharathi, Assistant Professor
- Mrs. M. J Chithraja, Assistant Professor
- Mr. B. Praveen Kumar, Assistant Professor
- Mr. D. Mohan Reddy, Assistant Professor
- Mr. N.Gangadharam, Assistant Professor
- Mr. V.Umamaheswararao, Assistant Professor
- Mr. M.Tulasiram, Assistant Professor
- Mr. M. Arun Kumar, Assistant Professor
- Mr. G. Sivakoteswara Rao, AssistantProfessor
- Mr. C. Manikanta, Assistant Professor
- Mrs. B. Mounika, Assistant Professor
- Mr. R. Narayana Rao, Assistant Professor
- Ms. C. Bhagya, Assistant Professor
- Mr. D. Bhanu Prakash Reddy, Assistant Professor

---

- Mr. M. Gopi, Assistant Professor

## ABOUT VEMU IT:

VEMU Institute of Technology (VEMU IT) is one of the best and finest engineering college in Chittoor District, Andhra Pradesh. Beginning its quality inputs in 2008, it has attained ISO 2015:9001 certification for quality management within a short span of time. The institution's progress and contribution to the field of technical education for over one decade and accredited by NAAC in the year 2017, Recognized under 2(F) and 12(B) UGC Act, Permanent Affiliation with JNTUA (Anantapuramu), It is located in P. Kothakota, near Pakala & Tirupati - Chittoor Highway in a beautiful 16-acre campus. A diverse, talented community united by a passion for learning and quest for more, VEMUIT challenges its students to make a difference on its campus, in the region, and in the companies where ever they join. With unmatched results in every sphere of education, its commitment to be the best has grown to transform its departments into Center of Excellence.

## INDUSTRY SUPPORTED LABS:

With the support of the industry, Vemu Institute of Technology established the following laboratories in the college for the benefit of students to get trained in the emerging technologies:

- Dassault's 3D Experience Center
- AP CM's Skill Excellence Center
- YMTS Innovation Center
- Pavan Empower Solutions Lab
- Industrial IoT Lab
- Transformer Testing and manufacturing Lab
- Cloud Computing and Cyber Security Labs
- e-Yantra Robotics Lab

- MOUs with industries for internship, Training and projects viz. UI Path, RAVANDS, SNAM Alloys, CODE TANTRA, Young Minds Technology solutions, SR Unique solutions, Sigma Controls etc.
- MHRD – Institution's Innovation Council (IIC) has been established and actively functioning.
- Certification courses by foreign universities

## Other features:

- Promotion of industry-institution interaction exchange programs.
- Regular seminars, workshops and guest lectures by eminent Professors from Universities and Industry
- Training for Placements right from 1st year
- Special focus on Communication skills, analytical skills and technical skills
- Entrepreneurship Development Cell to make the students entrepreneurs
- R & D cell to inculcate the quest of research in students
- In-Plant Training and Internship arrangement for students
- Counseling by senior faculty members.
- Management headed by a retired and accomplished Professor
- Cultural and sports forums to encourage extracurricular activities
- Classrooms are spacious and well-furnished and provided with Audio-Visual teaching aids and the laboratories are equipped beyond the curriculum requirements.

- Exposure for students to the recent trends in technology through innovative teaching learning methods
- Merit Scholarships of 10,000 /5,000 for all those merit students who secure more than 85% / 80% marks in every year.

## ABOUT THE DEPARTMENT:

The department offers B. Tech. in Electronics & Communication Engineering, and M Tech in VLSI Design and Embedded System. The department has highly qualified faculty members, state of art laboratories and infrastructure. Continuing Education programs and customized training / workshops are being organized by industry personnel on regular basis. Students of the department are actively involved in various Co-curricular & Extracurricular activities and extension activities as a part of student's association (ELITES) activities. Both ECE Students and Faculties are having memberships in IETE, ISTE, IEEE etc., The Department has a full-fledged departmental library.

## ABOUT IIoT

The industrial internet of things (IIoT) refers to interconnected sensors, instruments, and other devices networked together with computers' industrial applications, including manufacturing and energy management. This connectivity allows for data collection, exchange, and analysis, potentially facilitating improvements in productivity and efficiency as well as other economic benefits.[1] The IIoT is an evolution of a distributed control system (DCS) that allows for

a higher degree of automation by using cloud computing to refine and optimize the process controls.

## Registration

## Link:

## GUIDELINES:

- ✓ No Participation fee will be collected
- ✓ Maximum no. of participants limited to 40 only
- ✓ 100% attendance is mandatory to issue Certificate
- ✓ Participants will be selected on first come first serve and will be intimated through the e-mail only
- ✓ Participation certificate will be provided.

## Accommodation:

- ✓ Free boarding and lodging will be provided for outstation participants

## FOR MORE DETAILS CONTACT:
**Email ID:**
**Phone Numbers: +91 9866621280,**

# VEMU INSTITUTE OF TECHNOLOGY

NEAR PAKALA, CHITTOOR-517112
(Approved by AICTE, New Delhi & Affiliated to JNTUA, Anantapur)
www.vemu.org

## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

**A One Week FDP on *"Industrial Internet of Things"***

On

**07th to 12th February 2022**

| S.No | Date | Time | Topics to be Covered | Resource Person |
|------|------|------|----------------------|-----------------|
| 1 | 07/02/2022 | 10.00AM to 11AM | **Inauguration** | |
| | | 11.00AM to 1 PM | Introduction to IoT and its Industrial Application: Keynote Speech | **Mr.V. Hruday Kumar** |
| | | 1.50PM to 4 PM | Introduction to Sensors and Actuators | **Mr.V. Hruday Kumar** |
| 2 | 08/02/2022 | 10.00AM to 1PM | Introduction to Data Acquisition | **Mr.V. Hruday Kumar** |
| | | 1.50PM to 4 PM | Introduction to Control Systems | **Mr.V. Hruday Kumar** |
| 3 | 09/02/2022 | 10.00AM to 1PM | Conversion of Sensor's Data to Physical Quantities | **Mr.P. Rohith** |
| | | 1.50PM to 4 PM | Statistical Analysis | **Mr.P. Rohith** |
| 4 | 10/02/2022 | 10.00AM to 1PM | Transmission and Reception of Data | **Mr.P. Rohith** |
| | | 1.50PM to 4 PM | Temperature Monitoring System | **Mr.P. Rohith** |
| 5 | 11/02/2022 | 10.00AM to 1PM | Warehouse Management | **Mr.S.Tharun** |
| | | 1.50PM to 4 PM | Remote Irrigation System | **Mr.S.Tharun** |
| 6 | 12/02/2022 | 1.50PM to 4 PM | Introduction to LabVIEW SystemLink API | **Mr.S.Tharun** |
| | | 1PM to 3PM | Valedictory | |

**Co-Ordinator**

**Convener**
HEAD
DEPARTMENT OF ECE
VEMU INSTITUTE OF TECHNOLOGY
P. KOTHAKOTA - 517 112

# VEMU INSTITUTE OF TECHNOLOGY

NEAR PAKALA, CHITTOOR-517112

(Approved by AICTE, New Delhi & Affiliated to JNTUA, Anantapur)

www.vemu.org

## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
## ATTENDENCE SHEET - FDP

| S.No. | Name of the Participant | 07/02/2022 | | 08/02/2022 | | 09/02/2022 | | 10/02/2022 | | 11/02/2022 | | 12/02/2022 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | FN | AN | FN | AN | FN | AN | FN | AN | FN | AN | FN | AN |
| 1. | Dr. S.MuniRathnam | | | | | | | | | | | | |
| 2. | Dr.G.Elaiyaraja | | | | | | | | | | | | |
| 3. | Dr. S. Leela Lakshmi | | | | | | | | | | | | |
| 4. | Mr.G.Sankarappa | | | | | | | | | | | | |
| 5. | Mrs. R.Rani | | | | | | | | | | | | |
| 6. | Mrs. K.Jaya Sree | | | | | | | | | | | | |
| 7. | Mr. Y.Mahesh | | | | | | | | | | | | |
| 8. | Mr. N.Kiran Kumar | | | | | | | | | | | | |
| 9. | Mr. .P.H.Chandra Mouli | | | | | | | | | | | | |
| 10. | Mrs.P.Tejaswini | | | | | | | | | | | | |
| 11. | Mr. P.Vemaiah | | | | | | | | | | | | |
| 12. | Mrs. P.Sirisha | | | | | | | | | | | | |
| 13. | Ms. V.Bharathi | | | | | | | | | | | | |
| 14. | Mr. B.Praveen Kumar | | | | | | | | | | | | |

| No. | Name | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15. | Mrs. J.V.Pesha | | | | | | | | | | | | |
| 16 | Mr. D.Mohan Reddy | | | | | | | | | | | | |
| 17 | Mrs.R.Sindhu | | | | | | | | | | | | |
| 18 | Mr. N.Gangadharam | | | | | | | | | | | | |
| 19 | Mr.M.Arun Kumar | | | | | | | | | | | | |
| 20 | Mr.G.Siva Koteswar Rao | | | | | | | | | | | | |
| 21 | Mr.C.Manikanta | | | | | | | | | | | | |
| 22 | Mr. M. Gopi | | | | | | | | | | | | |
| 23 | Ms. C. Bhagya | | | | | | | | | | | | |
| 24 | Mr. R. Narayana Rao | | | | | | | | | | | | |
| 25 | Mr. M.P. Chennaiah | | | | | | | | | | | | |
| 26 | Mr. T.K.Kalaiarasan | | | | | | | | | | | | |
| 27 | Mrs. C. Muni Kantha | | | | | | | | | | | | |
| 28 | Mrs. K.J.Poornima | | | | | | | | | | | | |
| 29 | Mrs.S. Vidya | | | | | | | | | | | | |
| 30 | Mrs.P. Sireesha | | | | | | | | | | | | |

**CO-ORDINATOR**

## Report-on
## Faculty development Program
## on
## "INDUSTRIAL INTERNET OF THINGS"
## (MOU Activity)

A one-week Faculty Development Program on "Industrial Internet of Things" was conducted by department of ECE by inviting Sri.V. Hruday Kumar, Product Engineer-Techfluent Solutions Pvt. Ltd, Hyderabad from 07-02-2022 to 12-02-2022. The main objective of this FDP is to provide hands on experience with NI my RIO.

**Day-1(07-02-2022)**, The programme was inaugurated by ECE Dept, VEMU IT .The FDP Programme was started with Dr. S. Munirathnam, HOD of ECE, had welcomed Resource person Sri. V. Hruday Kumar, Product Engineer-Techfluent Solutions Pvt. Ltd, Hyderabad , Principal Dr. Naveen Kilari and Vice Principal Dr .D. Chandra sekhar. He had given introduction of all Dignitaries of the programme and invited guest. Dr. Naveen Kilari, Principal shared his views about the program. He informed that these kinds of FDP Programmes improve the knowledge in teaching. He congratulated the Department for organizing such a program through online.

After inauguration Resource person Sri. V. Hruday Kumar started his session by introduction to Introduction to IoT and its Industrial Application & Introduction to Sensors and Actuators. This is an introductory lab describing the concepts of sensors and actuators. "How can we measure voltage?","How can we wire a thermistor and resistor to the breadboard?" and so on. The lab shows heating process of thermistor, the resulting voltage change and gives alarm after the temperature reaches threshold temperature value. Task description. Examine heating process of thermistor, how the output temperature can be measured andto give alarm when it is too high. Hands-on lab uses thermistor as a sensor and discrete LED as an actuator.

**Day-2 (08-02-2022),** Resource person discussed about Introduction to Data Acquisition. This is an introductory lab describing data acquisition process. It is covering the basic concepts like what are digital and analog signals, how to acquire them, what states Nyquist theorem, which frequency is the optimal for recovering the signal and how the digital signal is converted to analog voltage.

Introduction to Control Systems: This is an introductory lab introducing control systems, particularly PID control system. This lab will give an overall insight about proportional, integral and derivative components of PID controller

**Day-3 (09-02-2022),** Session was started by the resource person Mr. P. Rohith, Technical Engineer deliver the speech on Conversion of Sensor's Data to Physical Quantities. This is an introductory lab introducing the methods of conversion sensor's data to physical quantities. Lab is based on the IR range finder which converts the distance to corresponding voltage value

Statistical Analysis: This is an introductory lab teaching about the methods of statistical analysis. During lab students are gathering temperature information from the thermistor and doing further analysis with the array of collected values.

**Day-4(10-02-2022),** Mr. P. Rohith continued his speech by Transmission and Reception of Data. This is an introductory lab demonstrating data transmission and reception process over network using IoT protocols

Temperature Monitoring System: This is an advanced lab, which introduces student a small project of temperature monitoring and remote alarm signaling system

**Day-5(11-02-2022),** Mr.S.Tharun, application Engineer, discussed about Warehouse Management. This is an advanced lab, which introduces student a small project of storage and accumulating the goods in warehouses and saving all the information in the cloud.

Remote Irrigation System: This is an advanced lab, which introduces student a small project of remote irrigation control based on weather information.

**Day-6 (12-02-2022),** Mr.S.Tharun discussed Introduction to LabVIEW SystemLink API.

In this FDP Program the faculty members participated actively by asking doubts and the resource persons also clarified their doubts patiently.

# Photo gallery



Finally the FDP was ended by Valedictory. The resource person concluded the program by enhancing the knowledge on Introduction to IoT and its Industrial Application. The total program successfully completed with the cooperation of Principal, HOD, and all the faculty members of the department.

Head of the Department

# VEMU INSTITUTE OF TECHNOLOGY

**P.KOTHAKOTA, NEAR PAKALA, CHITTOOR-517112**

(Approved by AICTE, New Delhi & Permanently Affiliated to JNTUA, Accredited by NAAC & NBA
Recognised under 2(F) &12(B)of UGC Act 1956,An ISO 9001:2015 certified Institute)

## Department of Electronics and Communication Engineering

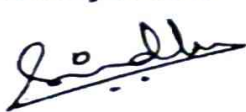# ★ Certificate of Participation ★

### This is to certify that

_Mrs. P. TEJASWINI_

of

_VEMU IT_

has actively participated in One Week FDP on "Industrial IoT" Organized by the Department of Electronics and Communication Enginee
VEMU Institute of Technology, P.Kothakota, In Association with Techfluent Solutions Pvt. Ltd., Hyderabad, from 07th to
February 2022.

| | | | |
|---|---|---|---|
| Co-Ordinator | PRINCIPAL | HOD-ECE | Principal |
| Mrs.R. Sindhu | VEMU INSTITUTE OF TECHNOLO... | Dr.S.Munirathnam | Dr.Naveen Kilari |

# VEMU INSTITUTE OF TECHNOLOGY

**P.KOTHAKOTA, NEAR PAKALA, CHITTOOR-517112**
(Approved by AICTE, New Delhi & Permanently Affiliated to JNTUA, Accredited by NAAC & NBA
Recognised under 2(F) &12(B)of UGC Act 1956,An ISO 9001:2015 certified Institute)

## Department of Electronics and Communication Engineering

# ✶ Certificate of Participation ✶

### This is to certify that

Mr. D. MOHAN REDDY

of

VEMU IT

has actively participated in One Week FDP on "Industrial IoT" Organized by the Department of Electronics and Communication Engine(
VEMU Institute of Technology, P.Kothakota, In Association with Techfluent Solutions Pvt. Ltd., Hyderabad, from 07th to
February 2022.

Co-Ordinator
Mrs.R. Sindhu

HOD-ECE
Dr.S.Munirathnam

Principal
Dr.Naveen Kilari