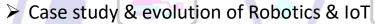# Internship On Industrial Robotics & IoT

4 Weeks

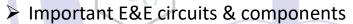➢ **Introduction to Robotics & IoT**
- Introduction to robotics & IoT
- IoT structure
- Introduction to industrial Robotics
- Applications of IoT
- Types of Robots

➢ **Case study & evolution of Robotics & IoT**
- History of Robotics & IoT
- Requirements of hardware & software
- Case studies on some projects

➢ **Important E&E circuits & components**
- Electronic components familiarization
- Circuit creation using software
- Different electronic circuit familiarization
- Application of circuits in robotics & IoT

➢ **Industrial robots & IoT**
- Components & classifications of Robot
- Configurations of system
- Drives & motions
- Degree Of Freedom(DOF)
- Technical parameters associated with robotics

➢ **Familiarization with the Dev. Environment**
- Integrated development environment (IDE)
- Sensor & actuators
- Familiarization of sensors with boards

➤ Programming in Robots & IoT

- Programming structure of IoT & robotics
- Programming boards
- Programming with Arduino IDE

➤ Data communication & technologies in IoT

- How to transfer data by wireless /wired connectivity
- Serial communication, Ethernet, CAN bus concept
- Concept of MQTT,HTTP ,API & Rest API

➤ Practical / Projects

- Line follower Robot
- Obstacle-avoiding robot
- Bluetooth robot car
- Wi-Fi robot car
- Pick N Place robot with Blynk 2.0
- Home Automation using web server switch
- Home automation using Blynk 2.0
- Home Automation using Alexa
- Home Automation using Google Assistant
- Real-time data store in web server(DHT11)
- Data store in Thingspeak
- Plant watering system with Blynk 2.0