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ENCOURAGE ENRICH ENLIGHTEN

IoT Internship:

What You Get:

Gain hands-on experience working with IoT hardware and software, such as sensors, microcontrollers, communication protocols, and cloud computing platforms. Working on IoT projects can provide opportunities to identify and solve technical challenges and bugs. This can help you develop strong problem-solving skills and learn how to troubleshoot complex systems.

Exposure to different IoT applications, use cases, and industry trends. This can help you understand the potential of IoT technology and how it is being used in different industries. Many IoT projects require collaboration and teamwork, providing opportunities to work with other interns or team members on a project. This can help interns develop collaboration and teamwork skills, as well as experience working on a team project.

- R**eal-time IOT project** which you can extend for your **collage mini or final projects**.

- Create your **own IOT environment** in your local machine.

- Create an **android application** to interact with the IoT project

- **One on one** doubt clarification.

- **IOT Kit** worth Rs.1500/-

- **Course Excellence Certificate**

- Guidance for your future projects

Who can attend:
* College students of Electrical/Electronics/Computer science/AI/Mechatronics
* College students who want to do their projects in IOT
* Who want to start their career in IOT

Duration: **2 months (60 hours)**

Mode: **Online**

▼ Week 1:

- Introduction to IoT technology and applications
- Overview of IoT architecture and protocols
- Setting up development environment and tools for IoT
- Arduino environment setup
- Basic programming concepts for IoT devices

▼ Week 2:

- Understanding the Microcontroller NodeMCU
- Understanding different types of sensors and actuators
- Interfacing sensors and actuators with microcontrollers - sensor 1
- Programming microcontrollers for data acquisition and control - sensor 1

▼ Week 3:

- Interfacing sensors and actuators with microcontrollers - sensor 2
- Programming microcontrollers for data acquisition and control - sensor 2
- Interfacing sensors and actuators with microcontrollers - sensor 3
- Programming microcontrollers for data acquisition and control - sensor 3
- Connecting NodeMCU with Wi-Fi network

▼ Week 4:

- Introduction to IoT communication protocols - MQTT
- Complete understanding of MQTT protocol, how it works.
- Basic programing code to work with MQTT to transfer and receive data
- Hand's on Challenges based on MQTT protocol

▼ Week 5:

- Understanding the concept of the Internet of Things (IoT) platforms

- Setting up and using IoT platforms such as AWS IoT

- Integrating IoT devices with cloud services

- Security considerations for IoT devices and networks

- Understanding common IoT security threats and vulnerabilities

▼ Week 6:

- Developing IoT applications using popular IoT platforms such as Arduino and NodeMCU

- Introduction to Appinventor tool

- Creating our own mobile application

- Integrating IoT devices with mobile applications

- Testing and evaluating IoT applications

▼ Week 7:

- Idea generation for IOT projects

- First review of the project

- Developing an real-time IoT project

▼ Week 8:

- Support for the real-time project

- Final project presentation and evaluation