**IOT Workshop**

**ABOUT THE WORKSHOP:**

The workshop is intended to cover the advance IOT. The Internet of things is the internet working of physical devices, vehicles, buildings and other items—embedded with electronics, software, sensors, actuators, and network connectivity that enable these objects to collect and exchange data.

During the course of workshop students will be leveraged to integrate concepts like modeling of design through real time hands-on practical sessions.

**ADVANTAGES:**

* Knowledge on real time applications on IOTs
* How IOT works with different industries
* Forming on IOTs different automation system
* Real Time industrial application on IOTs

**WORKSHOP OVERVIEW:**

***Day 1***

* What is IOT? The need of IOT and its real time applications.
* How IOT works.
* IOT Architecture.
* Application  of IOT and Roles
* Use case of IoT products Application  of IOT and Roles
* How communications works with IOT.
* Design architecture of wireless network.
* Communication Protocol:
* HTTP
* HTTPS
* HTTP GET,POST,PUT and DELETE
* Web Services
* What is the role of IOT on different Sensor network?
* Choice of Sensors
* Interfacing Sensor with Node MCU
* Real Time Project Local Server  hosting with or without security
* Hands-on

***Day 2***

* Deep dive into MQTT protocol
* Clould MQTT
* MQTT FX
* Hands on using MQTT
* Introduction to Cloud
* Cloud Platforms
* Hands on using Adafruit Cloud platform
* Hands on using Blynk app
* Deep dive into MQTT protocol
* Real time project Cloud Server with  Google Assist

***Day 3***

* Introduction to Product Prototyping
* Life cycle of product prototyping
* POC,Prototype and MVP
* Structural design of sensor with different applications.
* Design a real time application on IOT
* Performance analysis of that application.
* Project optimization of that application.
* Role of IOT communication in different Automation system.
* Real Time Project Local Server hosting without security
* Automatic Updates/uploads of sensor value on IP/web.
* Real Time monitoring of sensors on a particular IP Address/server
* Acquire a control signal from an IP.

***Day 4***

* Hands-on.. Building real time applications

***Day 5***

* Hands-on.. Building real time applications