

## Internet of Things

This workshop offers a neat introduction on the “Internet of Things” and is based on the advanced development tools from Texas Instruments. The Tiva-C LaunchPad and the CC3100 BoosterPack offer a complete wifi IOT solution while the integration of Energia with the IOT platform simplifies the IOT application development.

### **Content:**

#### **Day 1:**

**9:30am-11:00am**

##### **Arm Cortex M4**

- Introduction
- Architecture
- LaunchPad
- Features

**11:15am- 1:00pm**

##### **Energia Framework**

- Overview of Energia
- Lab: Led, switch, UART, ADC, PWM Labs using Energia

**2:00pm- 3:30pm**

##### **Internet of Things**

- What is IOT?
- TCP/IP, internet terminologies
- CC3100 Booster-Pack overview

**3:45pm-5:00pm**

TCP Client Server Paradigm

Lab: Client Server Communication.

#### **Day 2:**

**9:30am-11:00am**

UDP Client Server Paradigm

Lab: Client Server Communication.

**11:15am- 1:00pm**

Implementing the MQTT protocol.

Lab: Transmitting short messages through Public network.

**2:00pm- 3:30pm**

Blynk Cloud Service

Lab: controlling peripheral through android app.

**3:45pm-5:00pm**

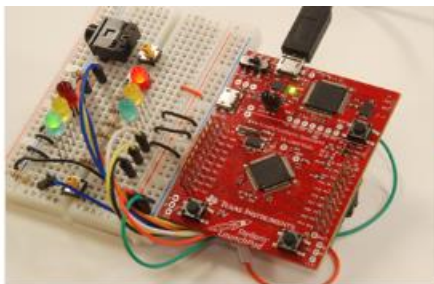
FreeBoard Cloud Service

Lab: SensorData Logging using public HTTP

**Take Away kits will be given to all participants**

**Kit includes:**

- Tiva-C LaunchPad
- CC3100 BoosterPack
- Energia, Code Composer Studio v6



Tiva-C LaunchPad



CC3100 wi-fi BoosterPack

**Note: Techfest, IIT Bombay Certificates to all participants (only if participant attends all the sessions).**