

Workshop Outline

Day 1

What is Internet of Things? (45 min)

Introduction

IoT Architectures

Building IoT Network (75 min)

Sensors, Actuators, MEMS

Smart Objects, SANETS, WSNS

Connecting IoT Devices Over Wireless with IEEE 802.15.4

Family of Protocols, Amendments - ZigBee, LPWANs, LoRaWAN

Home IoT Network – NFC, Bluetooth, WIFI, IPV6 – adaptations

Management Protocols – CoAP, MQTT, SCADA

Security

Beginning of your journey with IoT (Hands –on) (3 hours)

Instructor led step by step project

Hardware Setup and Data Collection

Overview of hardware board and companion networking board

Hands on with Sensors/Programming

Project with Sensors and data collection

Your journey with IoT (Hands-On) – Making sense of the Data (3 Hours)

Introduction to PTC ThingWorx IoT Platform – How PTC ThingWorx solutions reduce the time, cost, and risk required to build innovative Machine-to-Machine (M2M) and Internet of Things (IoT) applications

Project - Create remote thing in ThingWorx. Add properties that match with sensors.

Build an IoT application using the revolutionary Mashup Technology

Day 2

Thingworx IIoT Application Demo (1 hour)

Your journey with IoT (Hands-on) - Harnessing the data from IoT Network. (2 hours)

Thingworx Analytics – Introduction to Anomaly Detection

Analytics, Big Data, Machine Learning

Edge, Fog Computing

Industry Applications Overview (1 hour)

Manufacturing

Transportation

Smart City

Public Safety

Self-propelled exploration projects with IoT (4 hours)

Build your own IoT project

Choose from curated sample projects
Bring your own idea
Collect the Sensors data
Build IoT Applications using the data.
Analyze the data from sensors

Benefits:

Hands on Sessions by experts in Industry
IoT Kit will be provided to each team
Tap physical things into digital world
Monitor and Control physical things from IoT Apps
Interactive sessions with live demo on kits as well as opportunity to build on your own ideas
Introduction and training on PTC award winning IIoT Platform, Thingworx
Each Participant will get Certification.

Workshop Outcome:

Workshop will be first step towards journey of thousand miles in the field of professional IoT development landscape. It will give good overview of domain and future prospects in the field of IoT.

Venue : **College of Engineering, Pune**

Workshop Fees : **₹1100/- per participant**

DATE : **16th and 17th September**