

Internet of Things (IoT)

Internship Training



Become IoT Engineer

Appleton Innovations



Online Training on Internet of Things (IoT)

Using Internet of Things Development kit, you will develop projects like IoT based Weather Station using IBM Cloud, Home Automation using IOT, Chabot, IOT based smart irrigation controller and more than 10 projects

Syllabus

Module 1: Introduction to Internet of Things

- Introducing to IOT
- IOT Applications
- IOT Network Architecture
- IOT Device Architecture
- IOT Communication Protocols
- IOT Product Development Overview

Module 2: Getting Started with Arduino

- A tour of Arduino Board and Hardware: Power Supply, Power Pins, Analog and Digital Pins
- Types of Arduino Boards
- Introduction to Arduino programming
- Variables
- IF-Else conditional statements
- Loops: For, While
- Functions
- Digital Inputs and Digital Outputs

- The serial monitor
- Arrays and strings
- Using Libraries in Arduino
- Arduino data types
- Arduino Commands

Module 3: Sensors, Actuators & Electronics

- Introduction to sensors and types
- Analog Sensors: Temperature, Light Sensor, Potentiometer,
- Digital Sensors: Soil Moisture sensor, Motion Sensor, DHT11 sensor, Button
- Digital Signals
- Basic electronics: resistors, capacitors, diodes, transistors and etc.,
- Introduction to Actuators
- Interfacing Piezo Buzzer
- Interfacing LED's
- Interfacing RGB LED's
- Interfacing Relay

Module 4: Wireless Communication Technologies

- Introduction to wireless technologies: WiFi, Bluetooth, Ethernet, LoRaWAN, WiMAX and ZigBee
- Interfacing ESP8266 WiFi Shield
- Interfacing Bluetooth Module
- Interfacing Ethernet Shield

Module 5: IoT using Blynk Mobile Platform

- Installing Blynk application
- Setting up Blynk project
- Install Blynk Library
- Exploring various control widgets: Button, slider, zeRGBa, and timer
- Exploring various display widgets: Value display, Labelled value, Virtual LED Widget and Gauge Widget
- Notification widgets: Twitter, email
- Working with virtual pins
- Writing code and working with each widget

Module 6: Smart Applets suing IFTTT

- Introduction
- Automate day to day activities through IFTTT
- Posting updates on Facebook
- Automation with IFTTT
- Sending text message notifications
- Google Voice to control Home Appliances

Module 7: Cloud Data Monitoring using Arduino:

- Concept & Architecture of Cloud
- Role of Cloud Computing in IoT
- Tools, API and Platform for integration of IoT devices with Cloud
- Internet of Things platforms for Arduino
- Posting the sensor data online
- Retrieving your online data
- Monitoring sensor data from a cloud dashboard
- IoT cloud platform and integration with Gateway
- Working with Thingspeak platform

Module 8: Smart Home with AI Chat Bots

- Introduction to chat bots
- Creating AI Facebook Chat bot using Chatfuel
- Controlling Home Appliances using AI based Facebook Chat bot

Module 9: IoT using IBM Cloud

- Getting Started with IBM Watson IOT Platform
- Send Sensor data to Watson IOT Platform using MQTT
- Visualizing real-time data by using boards and cards
- Getting started with Watson IoT Platform using Node-RED
- Watson IOT Node & IBM IOT App Node
- Create Node-RED application to receive events from the device

Free Take Home Kit for Internet of Things Development

IoT Kit Contains

- IoT Development Board
- USB Cable
- Breadboard (Regular)
- Assorted Jumper Wires
- DHT 11 Sensor
- RGB LED
- LDR (Photo Resistor)
- Push Button
- Assorted LEDs
- Electronic Components
- Software tools and firmware

Participants will get take-home kit for free.

****Note: IoT Kits will be supplied through courier service or speed post**

Internet of Things (IoT) Projects Details

During Internship training, students develop the following projects

Project 1: Voice Controlled Home Automation using Smartphone

Project 2: Smart Light Bulb using App

Project 3: Panic Alarm Health product using NodeMCU and IFTTT

Project 4: IoT based Cloud Data monitoring system: Smart Agriculture

Project 5: IoT based Notifications: Email, Push and Twitter Notifications

Project 6: IOT Based Smart Irrigation controller

Project 7: Smart Applet projects based on IFTTT

Project 8: Smart Door Light and Presence Detection System

Project 9: Notification cube for alerts

Project 10: Artificial Intelligence-Based Chat bot for Appliance Control

Project 11: IoT Device Control and Automation using Adafruit IO

Project 12: IoT Sensor dash board using IBM Cloud and Node Red

Internship Training Duration:

- 30+ days
- 30+ hours live sessions with industry experts

Internship Fee:

- INR 4500+GST(INR 5300)
- Mode of payment online

Pay online using the link:

<https://rzp.io/l/onlineinternship>

Benefits:

- Online Instructor Led Training
- Training Completion Certificate
- Internship Completion Certificate
- Project Completion Letter
- IoT Kit

For more details, Contact us

Appleton Innovations Private Limited

D.No.43-7-30, Behind Railway New Colony Bus Stop,
1st lane, Opposite Haritha Apartments,
Railway New Colony, Visakhapatnam, Andhra Pradesh,
India, Pin 530016

Website:

www.appletoninnovations.com

Send a mail

info@appletoninnovations.com
appletoninnovations@gmail.com

Call us

+91-6301865670
+91-7569978839

For updates, follow us on:

<https://www.facebook.com/appletoninnovations/>
<https://www.linkedin.com/company/appleton-innovations/>
<https://twitter.com/appletonInnova1>