



Internet of Things (IoT)

Course Overview:

IoT Training will give you a complete idea of IoT Programming and its fundamentals on practical automation applications. The IoT course modules, Basics of IoT, IoT designs like Arduino, Raspberry pi, custom PCBs with Python & Cloud.

Training Features:

- 8X higher interaction in live online classes conducted by industry experts
- 40 Hrs. live Classes of IoT Developer with Interview Preparation
- 3 real-time industry projects with hands-on preparation
- Unlimited Interview Opportunities with Placement Support
- Industry-recognized course completion certificate

Delivery Mode:

- Online Live Virtual Instructor Led Training

Target Audience:

The Basic Requirement to start a career as an IoT, you'll need a Bachelor's degree or at least 1+ years of experience in Information Technology (IT). A Bachelor's degree in Technology justice will help you get the job.

Key Learning Outcomes:

The ability to do something well expertise.

- Introduction and components of IoT
- IoT device design with Arduino , raspberry pi ,custom PCB'S
- Circuit designing skills with micro controller programming
- Network design and management
- Applications, user interfaces for interacting and consuming data from IoT devices
- Web and mobile applications are developed using high-level languages, with Java, python, and Node.js
- Security aspects data encryption, appropriate authentication
- Data and artificial intelligence (AI)

Certification Details:

- Complete at least 85 percent of the course or attend one complete batch
- Successful completion and evaluation of the project



Curriculum

Introduction to Internet of Things

- What is IoT, how does it work
- Difference between Embedded device and IoT device
- Properties of IoT device
- IoT Ecosystem
- IoT Decision Framework
- IoT Solution Architecture Models
- How IoT is Transforming Businesses
- Major IoT Boards in the Market
- Explore Raspberry Pi

Setting up Raspberry Pi and Sensors (HAT Board)

- Setting up Raspberry Pi
- Showing working of Raspberry Pi using SSH Client and Team Viewer
- Understand Sensing actions
- Understand Actuators and MEMS
- Hands-On/Demo:
- Programming Sense HAT Board

Creating Solutions with Raspberry Pi

- Build weather station using Sense HAT and Python
- Prepare google spreadsheet for weather data collection
- Understand OpenCV
- Hands-On/Demo:
- Build a weather station using Sense HAT and store data in google sheets
- Use OpenCV for face detection, face recognition with a webcam

IoT Communication Protocol Types

- Types of wireless communication
- Major wireless Short-range communication devices, properties, comparison of these devices (Bluetooth, WIFI, ZigBee, 6LoWPAN)
- Major wireless Long-range communication devices, properties, comparison of these devices (Cellular IoT, LPWAN)
- Hands-On/Demo:
- Using RFID networking
- Using other networks such as WiFi and Bluetooth

Cloud Computing

- Communicating with the Cloud using Web Services.
- Cloud Computing & IoT.
- Popular Cloud Computing Services for Sensor Management.

Smart Cities and Smart Homes

- Case Study: Agriculture, Healthcare, Activity Monitoring

