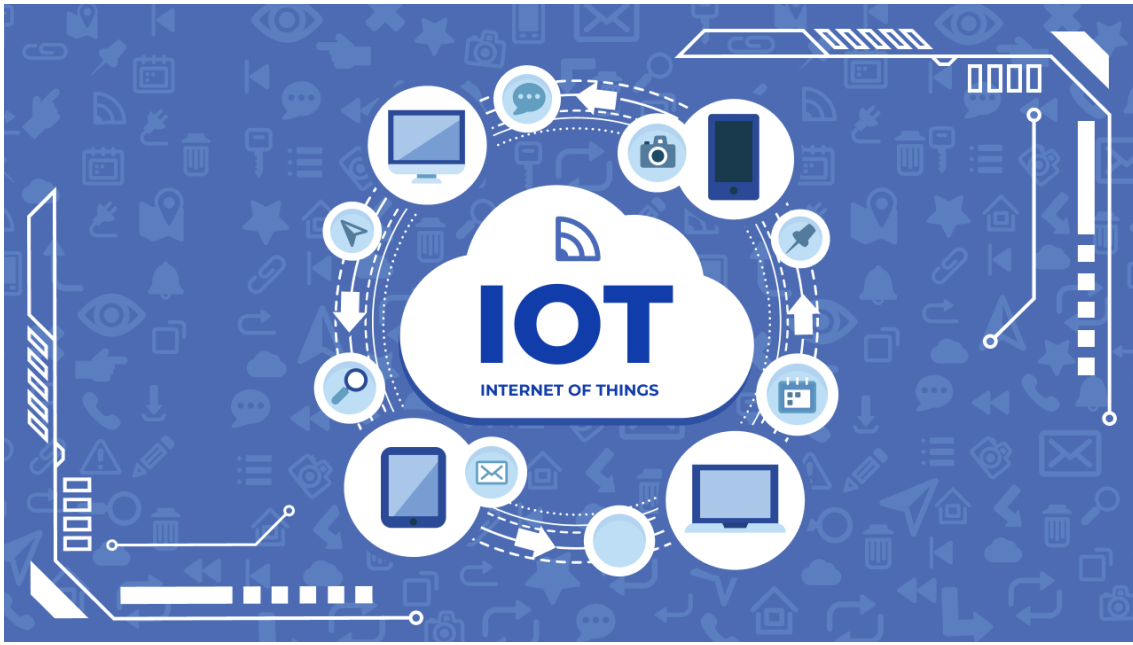


Welcome to ineuron.ai



## IOT

### **Description:**

This course will help you to grab the fundamentals of IOT.

### **Start Date:**

### **Doubt Clear Time:**

### **Course Time:**

### **Features:**

- # Course material
- # Course resources
- # On demand recorded videos
- # Practical exercises
- # Quizzes
- # Assignments
- # Course completion certificate

## **What we learn:**

# IoT Architecture & Communication Protocols

# MQTT Introduction

# MQTT Installation

# MQTT Pub Sub Test

# MQTT ACL

# MQTT ACL username creation

# MQTT ACL python program

# RPi4 Sensor Data through MQTT

# MongoDB Introduction

# Introduction to Azure IoT Hub

# Introduction to Azure Storage Account

## **Requirements:**

# System with Internet Connection

# Interest to learn

# Dedication

## **Instructor:**

### **>Course Introduction:**

>>Course Introduction

### **>IoT Architecture:**

>>IoT Architecture & Communication Protocols

### **>Introduction to MQTT:**

- >>MQTT Introduction
- >>MQTT Installation
- >>MQTT Pub Sub Test
- >>MQTT Debugging methods
- >>MQTT QoS
- >>MQTT sending json file
- >>MQTT listener configuration
- >>MQTT Security Methods
- >>MQTT username password
- >>MQTT Client Tools

## **>MQTT with Python:**

- >>MQTT Python Software Development
- >>Jupyter notebook hello world
- >>Python mqtt libarries
- >>Paho mqtt installation
- >>Paho mqtt sample test
- >>Python simulation data
- >>Simuation data program
- >>Publish simulation data
- >>Subscribe simulation data
- >>Username password in python program
- >>MQTT ACL

>>MQTT ACL username creation

>>MQTT ACL python program

**>RPI4 Sensor Data through**

**MQTT:**

>>Raspberry Pi 4 Introuction

>>Rpi python program for mqtt publish

>>Rpi sensor interfacing

>>Replacement of simulation with actual sensor data

**>MongoDB Introduction:**

>>NoSQL databases

>>NoSQL MongoDB Properties

>>MongoDB Installation

>>MongoDB CLI

>>MongoDB Python Library pymongo

**>IoT with Cloud Computing:**

>>Cloud Computing and IoT Services

**>Introduction to Azure IoT Hub:**

>>Azure IoT Hub Introduction

>>Azure IoT Hub In Depth

>>Your First Azure IoT Device

>>Your First Azure IoT Device Continued

>>D2C Azure Developer Options

>>D2C Python Code

>>Tools for monitoring messages

>>C2D Python code

>>Azure IoT Hub Python SDK

## **>Introduction to Azure Storage**

### **Account:**

>>Azure Storage Account Service Introduction

>>Create blob storage account

>>Saving d2c data in container blob

## **>Introduction to X509**

### **Certificates:**

>>Introduction to X509 certificates

>>Openssl for working with X509

>>Generating self signed certificate using openssl

>>D2C using Self Signed certificates