

Since 2007, Making IT Experts & Products

Course: IoT (Internet of Things)

Duration: 60 Hrs (Changeable) | Fees: Individual / Batch

Since 2007, Nestsoft TechnoMaster has been providing training, internships, and services in IT technologies, both online and offline, with the expertise of **over 250 industry experts**. We have delivered internships, training, and seminars to more than 50,000 students, resulting in numerous success stories. **We offer 100% placement support through JobsNEAR.in**

Our Courses/Internship

- Python/Django Fullstack
- Artificial Intelligence
- Machine Learning
- Data Science
- Software Testing (All)
- Wordpress, Woocommerce
- Digital Marketing, SEO
- Php/MySQL, Laravel
- Flutter, Android, IOS
- Asp.net MVC
- Web Design, Javascript
- Angular JS, React JS
- CCNA, MCSA, CCNP
- AWS, GCP, Azure
- Odoo, SalesForce, Sap
- Microsoft Excel
- Ethical Hacking



Syllabus on the Next Page ..



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Module 1 - Introduction

- * Concepts & Definitions
- * Myth with IoT
- * Business with IoT
- * Carrier in IoT
- * IoT Applications
- * IoT system overview
- * Node, Gateway, Clouds
- * Why IoT is essential
- * Machine learning
- * Artificial Intelligence

Module 2 - IoT Architecture

- * IoT Network Architecture
- * IoT Device Architecture
- * IoT Device Architecture
- * Publish-Subscribe architecture

Module 3 - IoT Device Design


- * Sensors Classification & selection criteria based on the nature, frequency and amplitude of the signal
- * Embedded Development Boards – Arduino, Raspberry Pi, Intel Galileo, ESP8266

Module 4 - IoT Communication Protocols

- * Wired Communication Protocols
- * Wireless Communication Protocols

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- * Application Protocols â€™ MQTT, CoAP, HTTP, AMQP
- * Transport layer protocols â€™ TCP vs UDP
- * IP- IPv4 vs IPv6

Module 5 - Cloud

- * Concept & Architecture of Cloud
- * Public cloud vs Private cloud
- * Different Services in cloud (IAAS / PAAS / SAAS)
- * Importance of Cloud Computing in IOT
- * Leveraging different Cloud platforms.

Module 6 - Designing The IoT Product

- * Interfacing peripherals & Programming GPIOs - Input/output peripherals,
- * Sensor modules
- * Design Considerations â€™ Cost, Performance & Power Consumption tradeoffs

Module 7 - Programming

- * Embedded C
- * Python
- * Arduino

Module 8 - A Hands-On Using Raspberry Pi Board

- * Setting up board
- * Booting up Raspberry Pi
- * Running python on Raspberry Pi, GPIO programming
- * Interfacing sensors and LED (Input and output devices)

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- * Making a few projects
- * Sending data to cloud 2 using Raspberry Pi board
- * Sending data to cloud 3 using Raspberry Pi board
- * Making raspberry Pi web server
- * Making raspberry PI TCP client and server
- * Making raspberry Pi UDP client and server

Module 9 - Use Cases

- * A cloud-based temperature monitoring system using Arduino and Node MCU
- * Esp8266 WIFI controlled Home automation
- * Obstacle detection using IR sensor and Arduino
- * Remote controlling with Node MCU
- * Temperature monitoring using a Raspberry Pi as local server
- * Raspberry Pi controlling Esp8266 using MQTT
- * weather monitoring system using Raspberry Pi and Microsoft Azure cloud

Module 10 - Closer

- * Existing Product in Market
- * Barrier in IoT

(Click on Course for more details)

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- Thank You -

N.B: This syllabus is not final and can be customized as per requirements / updates.

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