

Hot



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Introduction to IoT

- What is Internet of Thinking?
- Machine to Machine Communication
- Industrial Automation
- Explain how it works
- How is it change the world?
- IoT devices
- IoT Ecosystem
- IoT Adoption
- IoT Decision Framework
- Major Player in IoT Market
- Use cases of IoT

Design Consideration of IoT Systems

- Reference Architectures
- Explain Interoperability Issues
- What to consider in Design
- Architectures Device
- Network and Cloud Component
- Centralized and Distributed Architectures
- Communication Technologies and Protocols

Cloud Computing Platforms for IoT

- What is Cloud Computing
- Explain Public, Private and Hybrid clouds
- Cloud-based Gateway solutions
- Explain Cloud components and services like
- Device Management, Databases, Visualization, Reporting, etc
- Discussion on AWS IoT Services
- AWS IoT Button
- AWS Lambda Function
- AWS Device Gateway
- AWS Rules Engine



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IoT Protocols

Different Types of Wireless Communications
Discussion on Short-range Communication Devices and Properties (Bluetooth, Zigbee and WiFi)
Discussion on Wireless Long-range communication devices and Properties (Cellular communication and LPWAN)
Architecture of Sensor Node
MQTT
HTTP/HTTPs

Working with Arduino

Hardware and Software components
Setting up Arduino
Configure Sensors, Signals
Microcontroller
Create project using this Setup
Sending data to Cloud

working with Raspberry Pi

Setting up Raspberry Pi
Hardware Interactions with the Raspberry Pi
Understand Sensing Actions
Create project using this setup

Interacting IoT with Azure

Cloud Infrastructure for IoT
IoT Hub components on Cloud
Common Message Broker in AWS
Register Raspberry Pi with Gateway
Configure Send and Receive messages from Raspberry Pi
View Stored Data on Cloud
Restrict connect to Cloud



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IoT Security

Overview of Securities

Vulnerabilities

Restrict what kind of data to communicate

Authentication

Authorization

Hardware level securities



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