

INTERNET OF THINGS SYLLABUS

Module 1: Things & Internet

- Introduction
- Things:
 - About Sensors & Actuators
- Internet:
 - Devices at Different Layers
 - IPv4 Addresses
 - IPv6 Addresses
 - Interior Gateway Routing Protocol (IGRP)
 - Exterior Gateway Routing Protocol (EGRP)

Module 2: Standards and Protocols

- IEEE 802.11
- IEEE 802.15.4
- LoRaWAN
- 6LoWPAN
- Application Protocols

Module 3: Things Data Analytics

- Supervised Learning
- Unsupervised Learning
- Bias and Variance Tradeoff
- Artificial Neural Networks
- Evaluation Methods

Module 4: Privacy and Security of Things Data

- Data Privacy
- Elliptic Curve Cryptography
- Blockchain

Module 5: Smart Device Localization, Clustering, and Data Fusion

- Distance-based Localization Methods
- Distance-free Localization Methods
- Clustering Techniques
- Sensor Data Fusion

Module 6: Fog Computing

- Introduction
- Technologies for Fog Computing
- Mobility in Fog Framework
- Fog Orchestration

Module 7: Applications of IoT

- Introduction
- Smart Healthcare
- Smart City

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