

“By 2020 there will be a projected 30 Billion connected “Things” and a revenue opportunity of \$1.7T for the ecosystem.”

Source: Worldwide Internet of Things Forecast, 2015-2020

Gartner predicts:

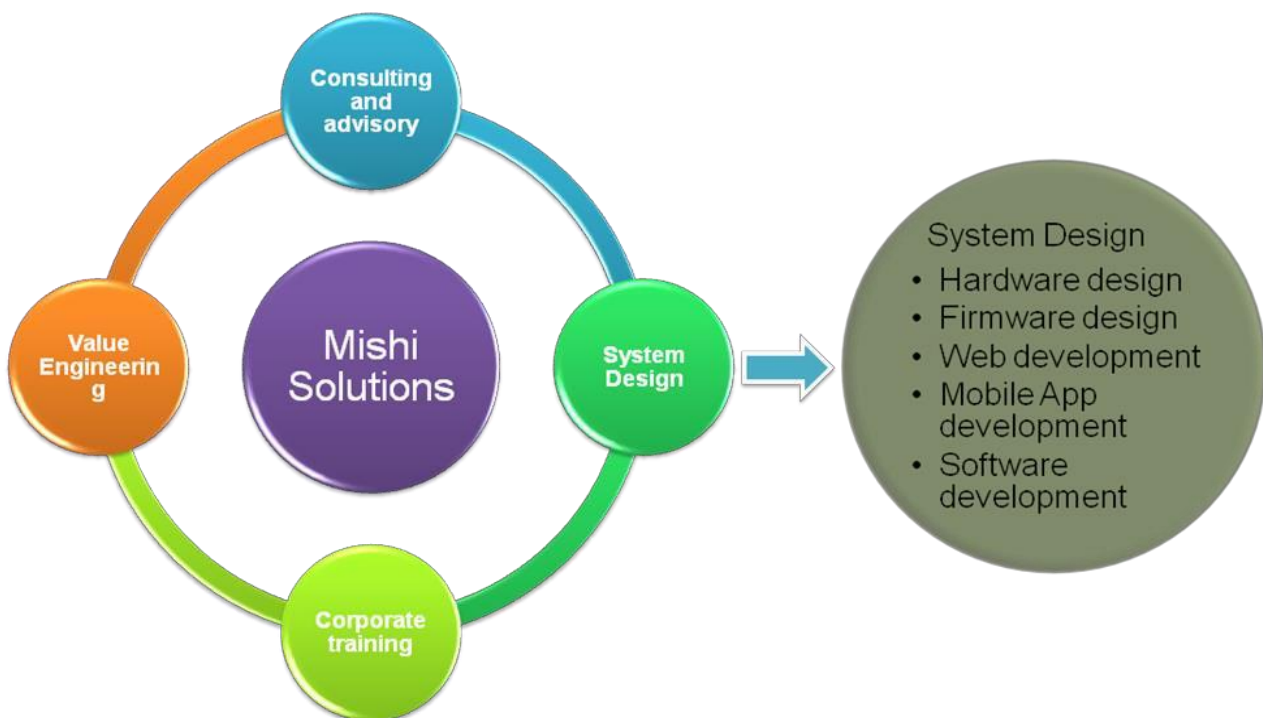
“World will need 300,000 IOT developers by year 2020. Anything we buy that costs over \$100 will be IoT enabled by 2018. 50 billion devices will be connected to Internet by 2020”.

About Us:

Mishi Solutions provide design consultancy services. We help our client to design, develop and deploy products and solutions for the connected world by our expertise to help them grow in their business quickly.

We empower people by providing the training on latest technologies. Our focus on delivering best in latest technologies.

Mishi Solutions is a team of enthusiastic peoples with different skill set and different domains to provide best solutions for different domains. We specialize in designing & development for creating solutions for industry automation, home automation, smart city, energy management.



Content

Session 1: Introduction (3H)

- Definitions
- Why this is perfect time for IoT
- Need of IoT
- Brief overview of IoT model
- Business with IoT
- Career with IoT
- Application of IoT

Session 2: Different IoT Architectures (2H)

- IoT Network Architecture
- IoT Device Architecture
- Client Server Architecture
- Publish Subscribe Architecture

Session 3: Nodes / Edge devices (3H)

- Sensors and actuator
- Embedded Development Boards
- Selection of sensor and board
- Edge Analytics

Session 4: Protocols (8H)

- Wired Communication protocols
- Wireless communication protocol
- Application Protocols
- Transport layer protocol – TCP, UDP
- IPv4 vs IPv6
- WSN (Wireless sensor Network)

Session 5: Gateway (1H)

- What is gateway?
- Role in IoT
- Communication protocols for Gateway

Session 6: Cloud (1H)

- Concept of cloud
- Architecture of Cloud
- Public cloud vs Private cloud
- Different Services in cloud (IAAS / PAAS / SAAS)
- Different cloud service providers

Session 7: Cloud Computing and Data Analytics (2H)

- Introduction to Big Data
- Who is generating the Big data
- Big data Analytics
- Application of Big data analytics
- Visual Analytics
- Visual Analytic Tools for Big Data.
- Predictive analytics
- Predictive Analytic Tools for Big Data.
- Difference between Edge analytics and cloud analytics

Session 8: Design and development of IoT device and system (1H)

- Interfacing Input/output peripherals & Sensor modules
- Design Considerations–Cost, Performance & Power tradeoffs

Session 9: Web Services (1H)

- What are Web Services?
- Why Web Services.
- Types of Web Services.
- RESTful web services.

Session 10: Hands on training using Arduino board (14H)

- Set up board
- Interfacing input - output devices with board
- Interfacing sensor with board
- Making few projects with board
- Interfacing Bluetooth with board
- Controlling board using Android mobile phone
- Connecting Wi-Fi with board
- Creating WLAN and control devices using web and mobile
- Making some smart projects for different applications
- Sending data to cloud on ThingSpeak
- Creating End to End IOT system & control using mobile phone

Session 11: Hands on training using Raspberry Pi (10H)

- Set up board
- Installing OS
- Connecting raspberry pi with laptop
- Interfacing LED with board
- Making few projects with board
- Making TCP client and server
- Making UDP client and server
- Configure AWS for receiving the data
- Sending data to cloud using Wi-Fi to AWS
- Using services of AWS like storage and computing

Session 12: AWS IOT (1H)

- Introduction to AWS
- Components of AWS : Device Gateway, Message Broker, Rules Engine, Security and Identity Service, Thing Registry, Thing Shadow, Thing Shadows service
- NoSQL Databases
- Use Cases
- Data Modeling

Session 13: Current Industrial trend (1H)

- Existing smart products in market
- Barrier in IoT

For more information:

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