# **Emerging Technologies 2021 - Awareness**

Artificial Intelligence (0.5 hours)

- The rise of Compute Power
- Hardware and Software platforms
- Programming Languages
- AI on the Cloud and On-Prem
- ML / DL (Machine Learning and Deep Learning)
- Supervised, Unsupervised and Reinforcement Learning (algorithms)
- Chatbots, Recommendation Engines and Face Recognition
- Data Science and Analytics
- Vendors and how do they stack up
- Applications (use cases) of AI
- ➢ Future
- Demo (Decision Tree Classifiers)

### Big Data (0.5 hours)

- Introduction, Implementation, Use Cases, Applications
- Vendors Apache, Cloudera, Hortonworks, MapR
- The 4 types of NoSQL Databases
- Data warehouses, Data Lakes and Delta Lakes
- ETL vs ELT
- Distributed File Systems (Hadoop)
- In Memory Solution SPARK
- Big Data on the Cloud
- Data Analysis Tools
- How Big Data complements AI

## IoT (**0.5** hours)

- Definition and Scope
- Technologies that enable IoT
- Sensors, Actuators etc. (Sensing devices)
- Propagators (Connectivity 4G/5G, Zigbee, NFC etc.)
- Integrators (People and Processes)
- How big is the IoT market?
- Applications of IoT (includes compound applications)
- The 4 stages of IoT maturity

- Functional view of IoT technologies
- Future Trends
- Demo (NodeRed)

#### Cloud Computing (**0.5** hours)

- > Trajectory
- Service Models
- Deployment Models
- Identity and Access Management
- Virtual Machines and Containers
- Serverless Compute
- Databases on the Cloud
- Programming for the Cloud
- Non-Functional Aspects
- Cloud Vendors and their offerings
- Seamless Multi-Cloud Interoperations
- The future of Cloud Computing

#### BlockChain (**0.5** hours)

- Blockchain concepts
- How did it all start
- Bitcoin and other cryptos
- Problems with existing monetary system
- Public Key Cryptography (Asymmetric Encryption)
- Advantages of using Blockchain
- Blockchain features
- Blockchain applications
- Current market and future trends
- Demo (Ether)

## CyberSecurity (**0.5** hours)

- Understanding the threat landscape
- NIST Cybersecurity Framework
- Exploiting and Protecting Assets
- Network Security
- Writing Secure Code (Dev-Sec-Ops)
- Cybersecurity Certifications
- Viruses, worms, trojans, zero-day exploits and other threats

- Cybersecurity and IoT
- Cybersecurity and Mobility
- Software testing (Penetration and Security)
- Vendors
- Ten points to remember

## Course Designed to cater to the following domains

- BFSI (Banking / Finance / Securities / Insurance)
- Healthcare and Life Sciences
- ✤ Retail
- Energy
- Education (EdTech included)
- ✤ Manufacturing
- eCommerce
- Telecom
- ✤ Tech

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#### Meet your Instructor



Rajesh Menon is a life coach (technology and well-being). He has over 30 years of experience in IT service delivery and corporate training. He is the author of several books and a sought-out speaker. His mission is to help people by making hard things simple to understand and apply.