Artificial Intelligence (AI) Essentials

ANI_203d | On-Demand | Automation and Insights | Expanded
Course Duration: 4 hours

Artificial Intelligence (AI) is revolutionizing all aspects of the computer industry. The impacts of AI have been seen on a number of areas such as speech and image recognition. The telecom industry is different. This course provides an overview of AI from a telecom perspective. AI is explored from a definition, underlying technology and use-cases perspective. It starts with an introduction to AI. The course then moves to key AI use cases and the AI technologies of Machine Learning and Deep Learning. The course concludes with a discussion on how to build an AI model, some of the common tools, and the key challenges.

Intended Audience

A high-level technical overview to personnel involved in product management, marketing, planning, design, engineering, and operating wireless (4G, 5G) and wireline access networks

Objectives

After completing this course, the student will be able to:

- Define Artificial Intelligence (AI)
- List the key use cases within telecommunications for AI
- Compare and contrast deep learning and machine learning
- List different AI design models

Course Prerequisites

No Prerequisites

Outline

1. Introduction to AI
1.1 AI defined
1.2 Types of AI
1.3 Common non-telecom AI use cases

2. Service Provider AI Use Cases
2.1 How is telecom different?
2.2 Telecom use cases
2.3 Customer support
2.4 Engineering and planning
2.5 Retail and supply chain
2.6 Workforce management
2.7 Telecom impacting use cases
2.8 Autonomous driving
2.9 IoT
2.10 Impact of AI on telecom architecture
2.11 MEC

3. AI, Machine Learning, and Deep Learning
3.1 Machine Learning and Deep Learning defined
3.2 How to train an AI model
3.3 Types of Machine Learning
3.4 Impacts of data on Machine Learning model

4. Basics of Building an AI Model
4.1 Common AI tools
4.2 Key AI model structure
4.3 Types of neurons
4.4 Challenges and key considerations

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