



AI and ML in Telecom

TPR1064 | Expert-Led Live | Automation and Insights | Expert

Course Duration: 4 hours

This course provides an overview of Artificial Intelligent (AI) and Machine Learning (ML) from a telecom perspective. AI is explored from a definition, underlying technology and use-cases perspective. The course covers importance of data in AI/ML model creation, types of AI/ML models, and use cases that fit well for AI/ML models.

Intended Audience

Network leadership, Planning, Engineering, and Operations

Objectives

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

- Define AI, Machine Learning, Deep Learning and evolution to Generative AI
- Identify key data sources in telecom networks
- Define supervised and unsupervised learning and reinforced learning
- Discuss various types of AI models and their use cases in Telecom
- List key challenges of AI and ML model implementation in Telecom

Outline

1. Overview of AI and ML
 - 1.1 Definition and differences of AI and ML
 - 1.2 Compare and contrast AI, Generative AI, Agentic AI
 - 1.3 Relevance of AI and ML in Telecom
 - 1.4 Key capabilities and challenges of AI and ML
 - 1.5 Knowledge Check
2. Data Sources in Telecom
 - 2.1 Importance of data gathering and cleaning
 - 2.2 Data insight and data automation
 - 2.3 Data sources - network usage, network logs, customer data
 - 2.4 Knowledge Check
3. AI and ML Models and Techniques
 - 3.1 Supervised and unsupervised learning
 - 3.2 Reinforcement learning
 - 3.3 Deep Learning Models - CNN, RNN
 - 3.4 Common AI models - Classification, Regression models
 - 3.5 Example AI models in Telecom
 - 3.6 Knowledge Check
4. AI and ML Applications in Telecom
 - 4.1 Network optimization
 - 4.2 Network capacity prediction
 - 4.3 Fault prediction
 - 4.4 Knowledge Check
5. Key Considerations of AI and ML
 - 5.1 Challenges for implementing AI solutions

- 5.2 Data privacy and explainability
- 5.3 Trust in AI and ML models
- 5.4 Role of AI and ML vs. Gen AI and Agentic AI
- 5.5 Knowledge Check