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

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