QUEST
Professional Center

PROFESSIONAL TRAINING COURSE

Course No. 1268

AI in Telecommunications Training Course

AI FOR INDUSTRY
ARTIFICIAL INTELLIGENCE & APPLICATIONS

DURATION
5 Days

DELIVERY
Classroom

LOCATION
London, United Kingdom

DATES
30 Nov – 4 Dec 2026

Scheduled Event Details

CITY	London, United Kingdom
DATE	30 Nov – 4 Dec 2026
DELIVERY TYPE	Classroom
COURSE FEE	€5,800

Course Overview

The AI in Telecommunications Training Course is an advanced professional program designed to equip executives, managers, engineers, technology specialists, data professionals, and decision-makers with the knowledge and practical capabilities required to apply Artificial Intelligence across modern telecommunications environments. As telecom operators and technology organizations manage increasingly complex networks, growing data volumes, evolving customer expectations, and rapid technology development, AI has become an important capability for improving network performance, service reliability, customer experience, operational efficiency, and strategic decision-making.

The course explores practical applications of Artificial Intelligence, Machine Learning, Predictive Analytics, Generative AI, Computer Vision, Natural Language Processing, and intelligent automation across telecommunications operations. Participants will examine how AI can support network optimization, predictive maintenance, traffic forecasting, anomaly detection, capacity planning, fraud detection, customer experience management, service assurance, cybersecurity, and intelligent operations. The program connects emerging AI capabilities with real telecommunications business and operational requirements.

A major focus of the course is the use of AI with telecommunications data generated by networks, connected devices, customer interactions, operational systems, and digital platforms. Participants will learn how to identify valuable data sources, evaluate data quality, develop AI use cases, and integrate analytics into operational and strategic decision-making. The course also addresses the growing role of AI in 5G and advanced network environments, Internet of Things ecosystems, edge computing, Network Operations Centers, and software-defined network management.

The program also examines the governance, security, and implementation challenges associated with AI adoption in telecommunications. Topics include data governance, AI governance,

cybersecurity, privacy, model risk, responsible AI, regulatory considerations, human oversight, and organizational readiness. Through practical workshops, case studies, use-case development, and implementation exercises, participants will learn how to translate AI opportunities into structured initiatives that support operational excellence, digital transformation, service innovation, and sustainable telecommunications growth.

Objectives

- Analyze telecommunications operations and identify high-value opportunities for Artificial Intelligence implementation.
- Develop a comprehensive understanding of AI, Machine Learning, Predictive Analytics, and Generative AI applications in telecommunications.
- Evaluate network, customer, operational, and service data for AI-powered analytics and decision support.
- Apply Predictive Analytics techniques to network performance, capacity planning, service demand, and infrastructure management.
- Design AI-enabled solutions for network optimization, anomaly detection, predictive maintenance, and service assurance.
- Improve customer experience through AI-supported personalization, intelligent service management, and automated customer interaction.
- Strengthen telecommunications cybersecurity and fraud management through AI-driven detection and analysis.
- Implement appropriate data governance, AI governance, privacy, cybersecurity, and responsible AI practices.
- Assess organizational and technological readiness for implementing AI across telecommunications operations.
- Align AI initiatives with network modernization, 5G development, digital transformation, operational efficiency, customer experience, and strategic business objectives.

Who Should Attend

The AI in Telecommunications Training Course is designed for telecommunications executives, network directors, IT managers, technology leaders, digital transformation managers, network operations managers, service assurance managers, engineering managers, data scientists, data engineers, AI specialists, network engineers, telecommunications engineers, cybersecurity

professionals, business analysts, and professionals responsible for network performance and technology innovation.

The course is particularly relevant for professionals working in telecommunications operators, mobile network organizations, Internet service providers, technology companies, infrastructure providers, communication regulators, digital service providers, and organizations managing large-scale communication networks. It is also suitable for specialists involved in 4G and 5G networks, network optimization, Network Operations Centers, IoT, cloud telecommunications, edge computing, and software-defined networking.

The program is also valuable for senior decision-makers, innovation leaders, enterprise architects, customer experience managers, fraud and risk specialists, and digital transformation teams who need to understand how Artificial Intelligence can be integrated into telecommunications strategies, operational platforms, network infrastructure, customer services, and cybersecurity environments.

Learning Outcomes

- By the end of the AI in Telecommunications Training Course, participants will be able to:
- Explain the strategic role of Artificial Intelligence in modern telecommunications.
- Identify and prioritize AI use cases across network operations, customer services, cybersecurity, and business functions.
- Analyze telecommunications data to identify operational patterns, anomalies, risks, and performance opportunities.
- Apply Predictive Analytics to network demand forecasting, capacity planning, and infrastructure management.
- Design AI-supported approaches for network optimization and intelligent service assurance.
- Develop predictive maintenance approaches for telecommunications infrastructure and network equipment.
- Evaluate AI applications for customer experience, personalization, intelligent support, and service automation.
- Apply AI-based approaches to telecommunications fraud detection, cybersecurity, and operational risk management.
- Assess the governance, privacy, security, and regulatory requirements associated with telecommunications AI initiatives.

- Develop an AI implementation roadmap aligned with telecommunications modernization, 5G, digital transformation, operational excellence, and business objectives.

Course Outline

DAY 01

Foundations of AI in Telecommunications

- Artificial Intelligence and its strategic role in the telecommunications industry
- Machine Learning, Predictive Analytics, Generative AI, and intelligent automation
- Telecommunications data ecosystems and AI-ready data
- AI applications across network, customer, operational, and commercial functions

> **PRACTICAL WORKSHOP**
> Assessing AI opportunities and organizational readiness in a telecommunications environment

DAY 02

AI for Network Optimization and Operations

- AI-powered network performance management
- Network traffic forecasting and capacity planning
- Anomaly detection and intelligent fault management
- Predictive maintenance and asset performance optimization

> **PRACTICAL WORKSHOP**
> Designing an AI use case for network optimization and predictive maintenance

DAY 03

AI for Customer Experience, 5G, and Intelligent Services

- AI applications in customer experience and service management
- Intelligent customer interaction and conversational AI
- Personalization and customer behavior analytics

DAY 03 — CONTINUED

- AI applications in 5G, Internet of Things, edge computing, and connected services

PRACTICAL WORKSHOP

Developing an AI-enabled customer or intelligent network service solution

DAY 04

AI, Cybersecurity, Fraud Detection, and Governance

- AI applications for telecommunications cybersecurity
- Fraud detection, anomaly analysis, and risk monitoring
- Data governance and data quality for telecommunications AI
- AI governance, privacy, responsible AI, regulatory considerations, and human oversight

PRACTICAL WORKSHOP

Designing an AI governance and risk framework for a telecommunications organization

DAY 05

AI Strategy and Implementation in Telecommunications

- Developing an enterprise AI strategy for telecommunications organizations
- Prioritizing AI initiatives according to value, feasibility, risk, and operational impact
- Measuring AI performance through operational, customer, financial, and network KPIs
- Future trends in AI, 5G, autonomous networks, edge computing, IoT, and intelligent telecommunications

FINAL WORKSHOP

Developing a comprehensive AI in Telecommunications implementation roadmap, including prioritized use cases, data requirements, AI architecture considerations, governance framework, cybersecurity controls, implementation phases, stakeholder engagement, KPI framework, risk management, and an organizational action plan to improve network performance, service reliability, customer experience, operational efficiency, cybersecurity, innovation, and digital transformation.

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Register or Request More Information

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