

Course No. 1270

AI in Supply Chain & Logistics Training Course

AI FOR INDUSTRY
ARTIFICIAL INTELLIGENCE & APPLICATIONS

DURATION

5 Days

DELIVERY

Classroom



Course Overview

The AI in Supply Chain & Logistics Training Course is an advanced professional program designed to equip executives, managers, supply chain professionals, logistics specialists, procurement teams, operations leaders, data professionals, and decision-makers with the knowledge and practical capabilities required to apply Artificial Intelligence across modern supply chain and logistics operations. As organizations manage increasingly complex supply networks, fluctuating demand, global sourcing challenges, inventory pressures, transportation requirements, and customer expectations, AI provides powerful capabilities for improving visibility, forecasting, planning, automation, and operational decision-making.

The course explores practical applications of Artificial Intelligence, Machine Learning, Predictive Analytics, Generative AI, intelligent automation, Computer Vision, and Internet of Things technologies across supply chain management and logistics. Participants will examine how AI can support demand forecasting, inventory optimization, procurement analytics, supplier management, warehouse operations, transportation planning, route optimization, fleet management, shipment visibility, predictive maintenance, risk management, and customer service.

A key focus of the program is the use of data and AI to create more responsive, resilient, and intelligent supply chains. Participants will learn how to evaluate supply chain data, identify operational patterns, predict disruptions, optimize resources, and develop AI-enabled decision-support capabilities. The course also examines how AI can improve collaboration between procurement, logistics, warehouse management, manufacturing, sales, finance, and other business functions, creating a more integrated approach to supply chain performance.

The course also addresses the governance, cybersecurity, privacy, technology integration, and organizational considerations involved in implementing AI across supply chain and logistics environments. Through practical workshops, case studies, scenario analysis, and implementation exercises, participants will learn how to identify high-value AI opportunities, assess implementation readiness, develop appropriate performance indicators, and build practical AI strategies aligned with operational excellence, cost optimization, resilience, customer service, digital transformation, and long-term organizational objectives.

Objectives

- Analyze supply chain and logistics processes to identify high-value opportunities for Artificial Intelligence implementation.
- Develop a comprehensive understanding of AI, Machine Learning, Predictive Analytics, and intelligent automation applications in supply chain management.
- Evaluate procurement, inventory, transportation, warehouse, supplier, and operational data for AI-supported decision-making.
- Apply Predictive Analytics to demand forecasting, inventory planning, delivery performance, and supply chain risk management.
- Design AI-enabled approaches for inventory optimization, route planning, warehouse management, and logistics efficiency.
- Improve supply chain visibility and resilience through AI-supported monitoring, prediction, and risk analysis.
- Strengthen supplier management and procurement decisions through intelligent analytics and data-driven evaluation.
- Implement appropriate data governance, cybersecurity, privacy, AI governance, and responsible AI practices.
- Assess organizational and technological readiness for implementing AI across supply chain and logistics operations.
- Align AI initiatives with cost efficiency, service quality, resilience, sustainability, digital transformation, and strategic supply chain objectives.

Who Should Attend

The AI in Supply Chain & Logistics Training Course is designed for supply chain directors, procurement managers, logistics managers, warehouse managers, operations managers, distribution managers, transportation managers, inventory managers, sourcing professionals, procurement specialists, supply chain analysts, data analysts, data scientists, AI specialists, digital transformation professionals, IT managers, and business leaders responsible for supply chain performance.

The course is particularly relevant for professionals working in manufacturing, retail, e-commerce, oil and gas, energy, construction, healthcare, pharmaceuticals, food and beverage, transportation, logistics services, government entities, and large corporations managing complex supply networks.

It is also suitable for professionals involved in demand planning, strategic sourcing, supplier relationship management, inventory control, warehouse operations, fleet management, distribution, freight management, and supply chain risk management.

The program is also valuable for executives, transformation leaders, enterprise architects, innovation teams, finance professionals, operations leaders, and decision-makers seeking to understand how Artificial Intelligence can be integrated into supply chain strategy, procurement, logistics, inventory management, transportation, and enterprise operations.

Learning Outcomes

- By the end of the AI in Supply Chain & Logistics Training Course, participants will be able to:
- Explain the strategic role of Artificial Intelligence in modern supply chain and logistics management.
- Identify and prioritize AI use cases across procurement, planning, inventory, warehousing, transportation, and distribution.
- Analyze supply chain data to identify patterns, bottlenecks, risks, inefficiencies, and opportunities.
- Apply Predictive Analytics concepts to demand forecasting, inventory planning, delivery performance, and supply chain risk.
- Design AI-supported approaches for inventory optimization and replenishment planning.
- Evaluate AI applications for supplier performance analysis, procurement intelligence, and sourcing decisions.
- Develop AI-enabled approaches for warehouse optimization, transportation planning, route optimization, and fleet management.
- Assess the use of IoT, real-time data, and AI for supply chain visibility and disruption monitoring.
- Apply data governance, cybersecurity, privacy, responsible AI, and risk management principles to AI-enabled supply chains.
- Develop an AI implementation roadmap aligned with supply chain efficiency, resilience, cost optimization, service quality, sustainability, and digital transformation objectives.

Course Outline

DAY 01

Foundations of AI in Supply Chain & Logistics

- Artificial Intelligence and its strategic role in modern supply chains
- AI, Machine Learning, Predictive Analytics, Generative AI, and intelligent automation
- Supply chain data ecosystems and data-driven operations
- Digital supply chains, connected logistics, and intelligent decision-making

PRACTICAL WORKSHOP

Assessing supply chain AI opportunities and organizational readiness

DAY 02

AI for Demand Planning, Inventory, and Procurement

- AI-supported demand forecasting and demand sensing
- Inventory optimization and intelligent replenishment
- Predictive analytics for procurement and sourcing
- Supplier performance analysis and supplier risk prediction

PRACTICAL WORKSHOP

Developing an AI use case for demand forecasting, inventory optimization, or supplier management

DAY 03

AI for Warehousing, Transportation, and Logistics

- AI applications in warehouse management and fulfillment
- Intelligent transportation planning and route optimization
- Fleet management and predictive maintenance
- Computer Vision and AI for warehouse monitoring and operational control

DAY 03 — CONTINUED

PRACTICAL WORKSHOP

Designing an AI-enabled logistics optimization solution

DAY 04**AI for Supply Chain Risk, Visibility, and Governance**

- Supply chain risk identification and predictive disruption management
- Real-time supply chain visibility using IoT and AI
- Data governance and data quality for AI-enabled supply chains
- Cybersecurity, privacy, AI governance, and responsible AI

PRACTICAL WORKSHOP

Developing an AI-supported supply chain risk and governance framework

DAY 05**AI Strategy and Implementation in Supply Chain & Logistics**

- Developing an enterprise AI strategy for supply chain and logistics
- Prioritizing AI initiatives according to value, feasibility, risk, and operational impact
- Measuring AI performance through cost, service, inventory, delivery, productivity, and resilience KPIs
- Future trends in intelligent supply chains, autonomous logistics, digital twins, IoT, and Generative AI

FINAL WORKSHOP

Developing a comprehensive AI in Supply Chain & Logistics implementation roadmap, including prioritized use cases, data requirements, technology and integration considerations, governance framework, cybersecurity requirements, implementation phases, stakeholder engagement strategy, KPI framework, risk management approach, and organizational action plan to improve demand planning, inventory performance, procurement efficiency, warehouse productivity, transportation optimization, supply chain visibility, resilience, sustainability, and digital transformation.



Register or Request More Information

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