Generative AI for Operations and Supply Chain Professionals – 16 Hours

Course description

This training program is tailored for operations and supply chain professionals to learn how Generative AI (GenAI) tools, powered by Large Language Models (LLMs) such as Claude, GPT, Gemini, and others, can optimize processes, automate workflows, and enhance decision-making across logistics, inventory management, production planning, and operational efficiency. The course provides hands-on opportunities to deploy LLM-powered solutions for forecasting demand, analyzing procurement patterns, dynamic scheduling, and streamlining communication across teams. Focused on flexibility, the syllabus accommodates all major cloud platforms (e.g., AWS, Azure, GCP) and ensures adaptability to multiple LLM providers, enabling participants to achieve transformative outcomes across daily workflows.

Note: Please note that the tools and technologies covered in this course are subject to change, as the field of Generative AI is evolving at an exceptionally rapid pace.

Target Audience:

- Professionals across supply chain and operations domains, including demand planners, procurement managers, logistics coordinators, supply chain analysts, and warehouse supervisors.
- Teams responsible for driving operational efficiency, inventory optimization, production scheduling, and communication.
- Organizations looking to leverage Generative AI tools to enhance supply chain visibility and data-driven decision-making.

Course Contents:

Module 1: Introduction to Generative AI for Operations and Supply Chain

- Overview of Generative AI and LLMs (e.g., GPT, Claude, Gemini) and their relevance to operations and supply chain processes.
- Business applications: Predictive forecasting, demand planning, inventory automation, and communication streamlining.
- Exploring generative AI tools compatible with cloud setups across AWS, GCP, and Azure.

Module 2: AI-Powered Demand Forecasting and Inventory Optimization

- Using LLMs for demand forecasting: Automating predictions based on historical data and upcoming trends.
- Enhancing inventory management with AI: Balancing stock levels based on demand environments using predictive insights.
- AI-driven categorization and prioritization of inventory movement and planning strategies.

Module 3: Procurement Optimization with AI Analytics

- Automating supplier communication and procurement approvals using Generative AI.
- Using AI for analyzing vendor performance metrics and predicting procurement risks.
- Automating negotiation strategies with supplier pricing models powered by AI solutions.

Module 4: AI for Dynamic Scheduling and Logistics

- AI-optimized production planning and resource scheduling based on real-time conditions (e.g., seasonal trends, workforce availability).
- Enhancing logistics routing with AI to optimize delivery paths and reduce costs.

- Integrating predictive maintenance systems with LLMs to ensure operational continuity.

Module 5: AI-Enhanced Communication and Reporting

- Generating real-time communication updates (e.g., meeting summaries, team notifications) for logistics and operations teams.
- AI-driven reporting: Automating insights on supply chain efficiency, bottlenecks, and delivery accuracy.
- Using LLM APIs for generating stakeholder presentations or dashboards based on operational data trends.

Module 6: Ethical AI Implementation in Operations and Supply Chain

- Addressing bias in AI-generated vendor ratings or forecasts.
- Ensuring compliance with data privacy laws (e.g., GDPR, CCPA) in supply chain workflows.
- Guidelines for auditing AI-powered processes to maintain transparency and accuracy in operational outputs.