Predictive Analytics in Logistics & Supply Chain

Duration – 16 Hours

Program Description

This program is designed for supply chain and logistics professionals who want to harness the power of **predictive analytics** to improve forecasting, planning, and risk management. Participants will learn how to apply statistical models, machine learning techniques, and data-driven forecasting to anticipate demand fluctuations, optimize inventory, reduce operational risks, and enhance resilience. The program blends domain-specific logistics challenges (procurement, warehousing, transportation, and distribution) with hands-on predictive modeling using real datasets and tools.

Learning Goals

- Understand the role of predictive analytics in supply chain decision-making.
- Learn forecasting techniques for demand, inventory, and transportation needs.
- Apply machine learning models for prediction and optimization.
- Use predictive insights to improve procurement, warehousing, and distribution efficiency.
- Identify risks and disruptions using predictive risk modeling.
- Develop hands-on skills with predictive analytics tools and dashboards.
- Communicate predictive insights to stakeholders for strategic decisions.
- Apply predictive analytics in end-to-end case studies and projects.

Course Topics

- Introduction to Predictive Analytics in Logistics & SCM
- Data Preparation & Feature Engineering for Prediction
- Forecasting Techniques (Time Series, Regression, ML Models)
- Demand Forecasting & Inventory Planning
- Predictive Models for Transportation & Distribution
- Risk & Disruption Prediction in Supply Chains
- Integrating Predictive Analytics with BI Dashboards & Decision Systems
- Predictive Analytics Tools (Python, R, Power BI, or equivalent)
- Case Studies: Predictive Applications in Procurement, Warehousing, Transportation
- Capstone Project: Building a Predictive Analytics Solution for a Logistics Use Case

Modules can be customized to suit client's specific needs and duration accordingly