

Introduction:

This highly engaging and comprehensive big data analytics certification course offers extensive knowledge on addressing the complexities found in modern supply chains. It prepares professionals to effectively confront future challenges. The course in big data analytics for supply chain optimization is particularly valuable for individuals working within supply chain management and logistics.

The training will provide participants with the skills and methodologies necessary to forecast market demands accurately while implementing strategies that optimize supply chain activities, reduce operational costs, and improve service delivery.

Attendees will learn advanced data analytics techniques specifically designed to optimize supply chains. These techniques enable reductions in lead times, minimize costs, and support a smooth transition into the era of Industry 4.0.

Supply chain optimization involves reorganizing the flow of supply and demand by leveraging big data analytics to boost both efficiency and effectiveness. The primary goal of this supply chain optimization course is to offer a thorough understanding of how to analyze large datasets, extract actionable insights, and apply optimization methods to improve supply chain processes.

Participants will investigate a variety of optimization strategies aimed at enhancing each part of the supply chain, including forecasting, inventory management, logistics, and distribution. The course emphasizes fostering a data-driven culture in supply chain management.

Benefits of Enrolling in this Big Data Analytics Course:

This section outlines the advantages professionals gain by joining this course. Primarily, it will greatly enhance their ability to use big data for informed decision-making and innovation in supply chain management. Participants will deepen their understanding of current trends and gain practical experience with the tools and methods required for supply chain optimization.

The certification obtained upon successful completion of this course signifies a participant's dedication to excellence and readiness to operate in the advancing world of Industry 4.0.

Intended Audience:

- Business improvement specialists
- Pioneers and practitioners of Industry 4.0
- Supply chain managers

- Operations managers
- Project managers
- Finance managers
- Information technology managers
- Consultants

Course Objectives:

After completing this big data analytics course, participants will be able to:

- Use big data analysis tools and methods to identify patterns in supply chain behaviors
- Build virtual supply chain models and choose among alternatives to maximize profitability
- Recognize key sources of big data within their supply chain and logistics operations and optimize their use
- Analyze customer behavior trends and predict potential changes
- Strategically plan supply chain improvements using current facilities and workforce
- Prepare for the adoption of Supply Chain 4.0 as an integral part of Industry 4.0

Targeted Competencies:

Participants will develop competencies including:

- Identifying important big data sources within supply chains
- Achieving interoperability between different supply chains
- Using dynamic simulation based on big data analytics to perform real-time cost and benefit analyses
- Conducting quick short-term forecasting to support immediate decision-making
- Transitioning complex decision processes to artificial intelligence platforms
- Enabling personnel to focus on long-term strategic decisions while technology manages short-term operations

Course Content:

Unit 1: Industry 4.0 and Its Effect on Supply Chains

- Introduction to Industry 4.0
- Drivers and impacts of Industry 4.0
- The role of supply chain and logistics in Industry 4.0
- Visualizing Supply Chain 4.0 and the future of logistics

Unit 2: Big Data in Supply Chain and Logistics

- The five characteristics of big data in supply chain and logistics: volume, velocity, variety, value, variability, and veracity
- Identifying sources of big data in supply chain and logistics
- Approaches to data-driven supply chain optimization, focusing on specific algorithms such as k-means, Apriori, Aykin, and Babu

Unit 3: Supply Chain Optimization

- Frameworks centered on customer requirements
- Optimization of sales operations
- Optimization of distribution networks
- Optimization of inventory management

Unit 4: Manufacturing Process Optimization

- Strategies to optimize product design and encourage innovation
- Enhancing production processes through advanced big data analytics
- Applying big data analytics to improve logistics activities
- Using advanced models as foundations for future predictive analytics

Unit 5: Integration of Modern Software with Existing Enterprise Resource Planning Systems

- Overview of the capabilities of the anyLogic cloud platform
- Ensuring smooth interoperability between anyLogic software and existing enterprise resource planning systems
- Incorporating radio frequency identification and vehicle tracking systems for efficient connectivity
- Techniques to accelerate data extraction and ensure faster analysis and computation