

Course No. 1258

Predictive Analytics with AI Training Course

DATA SCIENCE & AI ANALYTICS
ARTIFICIAL INTELLIGENCE & APPLICATIONS

DURATION

5 Days

DELIVERY

Classroom



Course Overview

The Predictive Analytics with AI Training Course is designed to equip professionals with the knowledge and practical skills required to leverage Artificial Intelligence (AI) and predictive analytics to anticipate future business outcomes, improve strategic planning, strengthen operational performance, and support data-driven decision-making. As organizations increasingly depend on advanced analytics to remain competitive, predictive analytics has become a strategic capability that enables leaders to forecast trends, identify risks, optimize resources, improve customer experiences, and make proactive business decisions. This course provides a comprehensive framework for integrating AI-powered predictive analytics into enterprise operations to support digital transformation and sustainable organizational growth.

Artificial Intelligence is revolutionizing predictive analytics by combining Machine Learning, statistical modeling, predictive algorithms, Natural Language Processing (NLP), Generative AI, business intelligence, and real-time data processing to generate accurate forecasts and actionable insights. Throughout the Predictive Analytics with AI Training Course, participants will explore how AI models can predict customer behavior, financial performance, operational risks, equipment failures, workforce trends, market demand, supply chain disruptions, fraud, and business opportunities. The course emphasizes practical applications across multiple industries while demonstrating how predictive analytics creates measurable business value.

The course combines internationally recognized predictive analytics methodologies with practical AI applications relevant to government entities, ministries, financial institutions, oil and gas organizations, healthcare providers, manufacturing companies, telecommunications organizations, utilities, logistics providers, and multinational corporations. Participants will learn how to develop predictive analytics strategies, prepare and analyze data, evaluate predictive models, interpret analytical outputs, visualize predictive insights, and integrate predictive intelligence into organizational decision-making processes. The program also addresses data governance, model governance, cybersecurity, privacy protection, regulatory compliance, ethical AI, and responsible analytics practices to ensure secure and trustworthy implementation.

Combining strategic knowledge with practical implementation, this course prepares executives, managers, analysts, and technical professionals to successfully implement AI-powered predictive analytics initiatives. Through practical workshops, business simulations, real-world case studies, and implementation exercises, participants will develop the capabilities to improve forecasting accuracy, optimize business performance, strengthen risk management, support innovation, and

establish a predictive, data-driven organizational culture.

Objectives

- Analyze organizational data to identify opportunities for AI-powered predictive analytics implementation during the course.
- Develop a comprehensive understanding of predictive analytics methodologies and Artificial Intelligence technologies.
- Evaluate business scenarios using descriptive, diagnostic, predictive, and prescriptive analytical approaches.
- Apply Artificial Intelligence and Machine Learning techniques to develop predictive business models.
- Design predictive analytics frameworks that improve forecasting, planning, and strategic decision-making.
- Improve operational efficiency, customer insights, and resource optimization through AI-powered forecasting.
- Strengthen governance, model management, cybersecurity, privacy protection, regulatory compliance, and ethical AI practices.
- Implement predictive performance measurement using KPIs, dashboards, forecasting models, and business intelligence solutions.
- Assess organizational readiness for enterprise predictive analytics adoption.
- Align predictive analytics initiatives with digital transformation, operational excellence, enterprise risk management, and long-term business strategy.

Who Should Attend

The Predictive Analytics with AI Training Course is designed for executives, department managers, digital transformation leaders, operations managers, finance managers, risk managers, strategy managers, business managers, IT managers, business analysts, data analysts, business intelligence professionals, project managers, and decision-makers responsible for improving organizational performance through predictive insights.

The course is particularly valuable for professionals working in government entities, ministries, public sector organizations, central banks, commercial banks, financial institutions, insurance

companies, oil and gas organizations, healthcare providers, manufacturing companies, telecommunications providers, logistics organizations, utilities, educational institutions, and multinational corporations implementing advanced analytics and enterprise AI initiatives.

It is also suitable for data scientists, machine learning practitioners, reporting specialists, ERP professionals, business intelligence developers, innovation managers, consultants, quality professionals, performance management specialists, AI implementation teams, researchers, and professionals seeking to strengthen their expertise in predictive analytics and Artificial Intelligence.

Learning Outcomes

- By the end of the Predictive Analytics with AI Training Course, participants will be able to:
- Explain the strategic role of Artificial Intelligence in predictive analytics and enterprise decision-making.
- Collect, prepare, clean, and manage business data for predictive analytical applications.
- Apply Machine Learning, Predictive Analytics, Generative AI, Natural Language Processing, and statistical modeling techniques to solve business challenges.
- Develop predictive models that support forecasting, planning, and proactive business decisions.
- Interpret predictive analytical outputs and communicate insights through executive dashboards and data visualizations.
- Integrate predictive analytics with Business Intelligence platforms, enterprise reporting systems, and organizational decision-support solutions.
- Apply best practices for data governance, model governance, cybersecurity, privacy protection, regulatory compliance, and ethical AI.
- Measure organizational performance using AI-powered predictive KPIs, forecasting models, dashboards, and analytical reporting.
- Develop implementation roadmaps for enterprise predictive analytics initiatives.
- Lead AI-driven predictive analytics transformation that strengthens business resilience, operational excellence, innovation, digital transformation, and sustainable organizational growth.

Course Outline

DAY 01

Foundations of Predictive Analytics and Artificial Intelligence

- Introduction to predictive analytics and enterprise AI
- The predictive analytics lifecycle and business value
- Types of business data and enterprise data sources
- AI applications across predictive analytics environments

PRACTICAL WORKSHOP

Identifying predictive analytics opportunities across organizational functions

DAY 02

Data Preparation and Predictive Modeling

- Enterprise data collection and management
- Data cleaning, transformation, and quality management
- Exploratory Data Analysis (EDA) and statistical foundations
- Introduction to Machine Learning models for prediction

PRACTICAL WORKSHOP

Preparing datasets for predictive analytics projects

DAY 03

AI-Powered Predictive Analytics Techniques

- Machine Learning algorithms for forecasting and prediction
- Predictive modeling for business performance and customer analytics
- Natural Language Processing and text-based predictive analytics
- AI-powered Business Intelligence and predictive reporting

DAY 03 — CONTINUED

PRACTICAL WORKSHOP

Developing predictive models for real-world business scenarios

DAY 04**Governance, Risk, and Predictive Performance Management**

- Data governance and predictive model governance
- Cybersecurity, privacy protection, and regulatory compliance
- Ethical AI and responsible predictive analytics
- Performance measurement using KPIs, executive dashboards, forecasting metrics, and predictive business intelligence

PRACTICAL WORKSHOP

Designing governance frameworks and predictive analytics dashboards

DAY 05**Enterprise Predictive Analytics Strategy**

- Planning enterprise predictive analytics transformation initiatives
- Building a predictive, data-driven organizational culture
- Future trends in Artificial Intelligence, predictive analytics, and intelligent decision support
- Measuring business value and return on investment from predictive analytics initiatives

FINAL WORKSHOP

Developing a comprehensive Predictive Analytics with AI implementation roadmap, including predictive analytics strategy, governance framework, data quality plan, predictive KPI architecture, executive dashboard design, model management framework, stakeholder engagement strategy, implementation roadmap, and organizational action plan to improve forecasting accuracy, operational efficiency, business resilience, digital transformation, and sustainable organizational performance.



Register or Request More Information

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