

Course No. 1259

Data Visualization with AI Training Course

DATA SCIENCE & AI ANALYTICS
ARTIFICIAL INTELLIGENCE & APPLICATIONS

DURATION

5 Days

DELIVERY

Classroom



Course Overview

The Data Visualization with AI Training Course is designed to equip professionals with the knowledge and practical skills required to transform complex datasets into meaningful visual insights using Artificial Intelligence (AI). As organizations increasingly rely on data-driven decision-making, the ability to communicate analytical findings through clear, interactive, and intelligent visualizations has become essential for executives, managers, analysts, and decision-makers. This course provides a comprehensive framework for combining modern data visualization techniques with AI technologies to improve business intelligence, accelerate decision-making, strengthen organizational transparency, and enhance operational performance.

Artificial Intelligence is revolutionizing data visualization by automating dashboard creation, recommending optimal visual formats, generating intelligent narratives, detecting trends and anomalies, and delivering real-time business insights. Throughout the Data Visualization with AI Training Course, participants will explore how Machine Learning, Generative AI, Natural Language Processing (NLP), Predictive Analytics, Business Intelligence (BI), and AI-powered analytics platforms enhance data visualization, executive reporting, KPI monitoring, and strategic performance management. Participants will learn how to present complex information in a way that enables faster understanding and more effective business decisions.

The course combines internationally recognized visualization principles with practical AI applications relevant to government entities, ministries, public sector organizations, financial institutions, oil and gas organizations, healthcare providers, manufacturing companies, telecommunications organizations, logistics providers, and multinational enterprises. Participants will learn how to design professional dashboards, select appropriate visualization techniques, build executive reports, develop compelling data stories, monitor organizational performance, and communicate business insights effectively. The program also addresses data governance, data quality, cybersecurity, privacy protection, regulatory compliance, accessibility standards, and ethical AI to ensure responsible and trustworthy data visualization practices.

Combining strategic knowledge with hands-on implementation, this course enables executives, managers, analysts, and technical professionals to successfully implement AI-powered data visualization initiatives. Through practical workshops, business simulations, real-world case studies, and implementation exercises, participants will develop the capabilities to build intelligent dashboards, improve executive reporting, enhance business intelligence, support digital transformation, and establish a culture of data-driven decision-making across the enterprise.

Objectives

- Analyze organizational reporting requirements to identify opportunities for AI-powered data visualization implementation during the course.
- Develop a comprehensive understanding of data visualization principles and Artificial Intelligence applications.
- Evaluate business data to determine the most effective visualization techniques for different audiences and decision-making needs.
- Apply Artificial Intelligence technologies to automate dashboard creation, reporting, and analytical storytelling.
- Design intelligent dashboards and executive reports that improve strategic planning and operational performance.
- Improve organizational reporting quality through AI-powered visualization, interactive dashboards, and business intelligence solutions.
- Strengthen the use of predictive analytics, Machine Learning, and Generative AI for advanced visual analytics.
- Implement best practices for data governance, data quality, cybersecurity, privacy protection, regulatory compliance, accessibility, and ethical AI.
- Assess organizational readiness for enterprise AI-powered data visualization initiatives.
- Align AI visualization strategies with business intelligence, digital transformation, performance management, and continuous improvement objectives.

Who Should Attend

The Data Visualization with AI Training Course is designed for executives, department managers, business managers, digital transformation leaders, operations managers, IT managers, business analysts, data analysts, business intelligence professionals, reporting specialists, performance management professionals, project managers, strategy managers, and decision-makers responsible for communicating business insights and organizational performance.

The course is particularly valuable for professionals working in government entities, ministries, public sector organizations, banks, financial institutions, insurance companies, oil and gas organizations, healthcare providers, manufacturing companies, telecommunications organizations, logistics providers, educational institutions, utilities, and multinational corporations implementing enterprise reporting and business intelligence initiatives.

It is also suitable for data scientists, data engineers, BI developers, dashboard designers, ERP specialists, management consultants, quality professionals, innovation managers, AI implementation teams, researchers, and professionals seeking to enhance their expertise in AI-powered visualization, executive reporting, and business analytics.

Learning Outcomes

- By the end of the Data Visualization with AI Training Course, participants will be able to:
- Explain the strategic role of Artificial Intelligence in modern data visualization and business intelligence.
- Analyze business data and select the most effective visualization techniques for different business scenarios.
- Apply Machine Learning, Generative AI, Predictive Analytics, and Natural Language Processing to develop intelligent visual analytics.
- Design professional dashboards that effectively communicate organizational performance and business insights.
- Develop compelling data storytelling techniques that transform analytical findings into actionable executive recommendations.
- Integrate AI-powered visualization tools with Business Intelligence platforms, enterprise reporting systems, and analytics solutions.
- Apply best practices for data governance, data quality, cybersecurity, privacy protection, regulatory compliance, accessibility, and ethical AI.
- Measure business performance using executive dashboards, KPI scorecards, interactive reports, and AI-driven visualization tools.
- Develop implementation roadmaps for enterprise AI-powered data visualization initiatives.
- Lead AI-driven visualization transformation that strengthens executive decision-making, organizational transparency, digital transformation, operational excellence, and sustainable business performance.

Course Outline

DAY 01

Foundations of Data Visualization and Artificial Intelligence

- Introduction to data visualization and business intelligence
- Principles of effective visual communication
- Fundamentals of Artificial Intelligence in data visualization
- Types of business data and visualization methods

PRACTICAL WORKSHOP

Identifying organizational reporting and visualization opportunities

DAY 02

Data Preparation and Dashboard Design

- Data collection, preparation, and quality management
- Selecting appropriate charts and visualization techniques
- Designing interactive dashboards and executive reports
- Data storytelling fundamentals

PRACTICAL WORKSHOP

Building professional dashboards using AI-assisted visualization tools

DAY 03

AI-Powered Advanced Visualization

- Generative AI for automated reporting and dashboard development
- Machine Learning and Predictive Analytics for visual insights
- Natural Language Processing for narrative reporting
- Integrating AI visualization tools with Business Intelligence platforms

DAY 03 — CONTINUED

PRACTICAL WORKSHOP

Developing AI-powered executive dashboards and visual analytics solutions

DAY 04**Governance, Performance Measurement, and Responsible AI**

- Data governance and data quality for visualization projects
- Cybersecurity, privacy protection, and regulatory compliance
- Ethical AI, accessibility standards, and responsible visualization practices
- KPI development, executive scorecards, and performance dashboards

PRACTICAL WORKSHOP

Designing governance frameworks and executive performance dashboards

DAY 05**Enterprise AI Data Visualization Strategy**

- Planning enterprise AI-powered data visualization initiatives
- Building a data-driven culture through visual analytics
- Future trends in AI, Business Intelligence, visual analytics, and executive reporting
- Measuring the strategic value and business impact of visualization initiatives

FINAL WORKSHOP

Developing a comprehensive Data Visualization with AI implementation roadmap, including visualization strategy, data governance framework, dashboard architecture, KPI framework, executive reporting model, data storytelling strategy, stakeholder engagement plan, implementation roadmap, and organizational action plan to improve reporting quality, strengthen executive decision-making, accelerate digital transformation, enhance business intelligence, and achieve sustainable organizational excellence.



Register or Request More Information

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