Data Science for Business Intelligence Professionals Training Course

Professional Development Training Course Outline

Category	Business Intelligence	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

Data Science has revolutionized the way businesses analyze and interpret data. For Business Intelligence (BI) professionals, acquiring advanced data science skills is critical to bridging the gap between traditional reporting and predictive analytics. Data Science for Business Intelligence Professionals Training Course equips participants with cutting-edge tools and methodologies to transform raw data into actionable insights, enabling smarter decision-making and enhanced business performance.

With the integration of machine learning, statistical modeling, and data visualization techniques, BI professionals can harness the power of data-driven strategies. Participants will learn to design, implement, and optimize analytics workflows while improving their ability to forecast trends, identify opportunities, and support organizational objectives with data-backed decisions.

Programme Curriculum

Data Science for Business Intelligence Professionals Training Course

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organizational objectives with data-backed decisions.

Course Objectives

1. Understand the fundamentals of Data Science and its role in BI transformation
2. Apply statistical techniques for data analysis and interpretation
3. Develop predictive models using machine learning algorithms
4. Utilize Python and R for data manipulation and analytics
5. Build interactive dashboards and visualizations for informed decision-making
6. Implement data preprocessing and cleaning strategies effectively
7. Conduct exploratory data analysis (EDA) for actionable insights
8. Integrate BI tools with advanced analytics frameworks
9. Apply data storytelling techniques for business impact
10. Optimize workflows with automation and analytics pipelines
11. Leverage big data technologies for large-scale analytics
12. Ensure data governance and ethical data usage in BI projects
13. Evaluate real-world case studies to apply practical solutions

Organizational Benefits

- Enhance data-driven decision-making capabilities
- Improve forecasting and predictive analytics accuracy
- Streamline reporting processes with automated workflows
- Reduce operational inefficiencies through data insights
- Strengthen strategic planning with actionable analytics
- Increase cross-departmental collaboration through shared dashboards
- Empower teams with advanced analytics tools and techniques
- Improve ROI by prioritizing data-backed initiatives
- Foster a culture of continuous learning and innovation
- Enhance competitive advantage through data intelligence

Target Audiences

- BI Analysts
- Data Analysts
- Business Consultants
- Reporting Specialists
- IT Professionals in analytics roles
- Project Managers handling BI projects
- Decision-makers seeking analytics-driven insights
- Professionals aspiring to transition from BI to Data Science

Course Duration: 5 days

Course Modules

Module 1: Introduction to Data Science for BI

- Overview of Data Science and BI integration
- Key concepts: data types, structures, and sources
- Understanding the analytics lifecycle

- Introduction to Python and R for BI professionals
- Case Study: BI dashboard enhancement using data science
- Hands-on practice: Exploring sample datasets

Module 2: Data Collection and Preprocessing

- Techniques for data extraction from multiple sources
- Data cleaning and handling missing values
- Feature selection and transformation strategies
- Data normalization and scaling methods
- Case Study: Cleaning and preparing sales data for analysis
- Hands-on exercise: Preprocessing real-world datasets

Module 3: Exploratory Data Analysis (EDA)

- Descriptive statistics and data profiling
- Visualizing data trends using Python and BI tools
- Detecting outliers and anomalies
- Correlation analysis and feature importance
- Case Study: EDA on customer behavior data
- Hands-on: Creating charts and plots to uncover insights

Module 4: Statistical Techniques for BI Professionals

- Hypothesis testing and confidence intervals
- Regression analysis for business predictions
- Time series analysis for trend forecasting
- Statistical modeling in BI context
- Case Study: Predicting sales using regression models
- Hands-on activity: Statistical analysis on sample data

Module 5: Machine Learning Fundamentals

- Supervised and unsupervised learning concepts
- Classification and clustering techniques
- Decision trees, random forests, and ensemble methods
- Model evaluation and validation metrics
- Case Study: Customer segmentation for targeted marketing
- Practical exercise: Building predictive models

Module 6: Data Visualization and Dashboarding

- Best practices for BI dashboards
- Interactive visualization using Power BI and Tableau
- Combining visual storytelling with analytics
- KPI tracking and report automation
- Case Study: Interactive dashboards for executive reporting
- Hands-on: Creating BI dashboards with visual insights

Module 7: Advanced Analytics Integration

- Incorporating predictive analytics into BI workflows

- Automation of analytics pipelines
- Integrating big data technologies with BI tools
- Scenario analysis and simulation techniques
- Case Study: Forecasting inventory needs using predictive models
- Hands-on: End-to-end analytics pipeline implementation

Module 8: Real-World Applications and Case Studies

- Evaluating practical BI projects with data science
- Lessons from industry best practices
- Challenges and solutions in analytics adoption
- Data governance and ethical considerations
- Case Study: Improving financial reporting using data science
- Hands-on: Capstone project integrating all modules

Training Methodology

- Instructor-led interactive sessions with real-time examples
- Hands-on practical exercises using Python, R, Power BI, and Tableau
- Group discussions to encourage collaborative learning
- Case study analysis of real-world business scenarios
- Quizzes and assessments to track understanding
- Capstone project for end-to-end application of skills

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

Ready to enroll or request a customized program? Book online or contact us:

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