Fundamentals of Data Science Training Course

Professional Development Training Course Outline

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

Course Introduction

In today's data-driven world, the ability to extract meaningful insights from vast amounts of data is a crucial skill for organizations and professionals. The Training Course on Fundamentals of Data Science is designed to provide a comprehensive introduction to data science concepts, tools, and techniques. This course empowers participants to analyze, interpret, and visualize data effectively to make informed decisions that drive innovation and success.

Data science is at the heart of technological advancements and business growth, making it one of the most sought-after skills globally. This course covers essential topics such as data exploration, statistical modeling, machine learning basics, and data visualization. It is tailored for individuals who want to gain a solid foundation in data science, regardless of their prior experience in the field.

Programme Curriculum

Fundamentals of Data Science Training Course

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who want to gain a solid foundation in data science, regardless of their prior experience in the field. Throughout the training, participants will engage in hands-on exercises, practical case studies, and interactive sessions to develop their data science expertise. By leveraging cutting-edge tools and techniques, learners will be equipped to handle real-world challenges and identify actionable insights from complex datasets.

Course Duration

5 Days

Course Objectives

1. Understand the fundamentals of data science and its applications.
2. Gain knowledge of data collection, cleaning, and preprocessing techniques.
3. Learn the basics of statistical analysis and hypothesis testing.
4. Explore data visualization tools and techniques for effective communication.
5. Understand the principles of machine learning and predictive modeling.
6. Develop skills in Python and other data science tools.
7. Learn to handle large datasets and perform exploratory data analysis (EDA).
8. Understand the ethical implications of data handling and analysis.
9. Identify actionable insights to solve real-world problems using data.
10. Build confidence to pursue advanced topics in data science and analytics.

Organizational Benefits

1. Build a team proficient in extracting insights from data for strategic decisions.
2. Enhance operational efficiency through data-driven approaches.
3. Develop a competitive edge by leveraging analytics for innovation.
4. Foster a culture of data literacy and analytical thinking.
5. Strengthen compliance with data governance and ethical practices.
6. Improve customer satisfaction with insights into consumer behavior.
7. Optimize business processes by identifying trends and patterns.
8. Boost employee productivity through skill enhancement in data handling.
9. Enable accurate forecasting and risk management through predictive analysis.
10. Drive growth and innovation by incorporating data science into organizational strategy.

Target Participants

- Business professionals and decision-makers.
- Data analysts and aspiring data scientists.
- IT professionals looking to transition into data science roles.
- Academicians and researchers interested in analytics.
- Marketing and sales professionals who want to leverage data insights.

- Students pursuing careers in analytics and data science.
- Entrepreneurs seeking data-driven strategies for business growth.
- Professionals in finance, healthcare, logistics, and other data-intensive fields.
- HR professionals aiming to enhance talent analytics capabilities.
- Anyone with a keen interest in understanding and applying data science concepts.

Course Outline

Module 1: Introduction to Data Science

1. What is Data Science? Definition and scope.
2. Key concepts and the data science lifecycle.
3. Overview of tools and technologies in data science (Python, R, etc.).
4. Applications of data science across industries.
5. Case Study: Data science applications in retail and e-commerce.

Module 2: Data Collection and Preprocessing

1. Techniques for data collection from various sources.
2. Data cleaning and handling missing data.
3. Data types and transformation techniques.
4. Introduction to exploratory data analysis (EDA).
5. Case Study: Cleaning and analyzing customer data for insights.

Module 3: Statistical Analysis and Hypothesis Testing

1. Fundamentals of descriptive and inferential statistics.
2. Probability distributions and their applications.
3. Hypothesis testing and confidence intervals.
4. Understanding correlations and regressions.
5. Case Study: Analyzing sales data for trend forecasting.

Module 4: Data Visualization and Communication

1. Importance of data storytelling.
2. Tools for visualization (Matplotlib, Tableau, Power BI).
3. Creating effective charts and graphs.
4. Using dashboards for decision-making.
5. Case Study: Visualizing business performance metrics.

Module 5: Introduction to Machine Learning

1. Overview of machine learning and its types (supervised, unsupervised).
2. Building simple predictive models.
3. Understanding model evaluation metrics.
4. Challenges and limitations of machine learning.
5. Case Study: Predicting customer churn using machine learning.

Module 6: Ethics and Future of Data Science

1. Ethical considerations in data handling and privacy.
2. Bias and fairness in algorithms.
3. Emerging trends in data science (AI, Big Data).
4. Preparing for advanced data science learning.
5. Case Study: Ethical dilemmas in real-world data projects.

Training Methodology

The instructor led trainings are delivered using a blended learning approach and comprises of presentations, guided sessions of practical exercise, web-based tutorials and group work. Our facilitators are seasoned industry experts with years of experience, working as professional and trainers in these fields.

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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