MERCURY

Data Science & Big Data Analytics Course

22 – 26 February 2027
Rome (Italy)



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Ref: 9314_272798 **Date:** 22 – 26 February 2027 **Location:** Rome (Italy) **Fees:** 7200 Euro

Introduction:

Information can exist in many forms and sources. The ability to extract, model, and analyze information can provide significant commercial benefits. Big Data Analytics can assist organizations in identifying trends and adjusting operational procedures to harness the results to increase revenue and client experience.

This data science and big data analytics course will provide a practitioner approach to identifying requirements for the application of data science, how these can be adopted, technologies available, which analytical models may be appropriate to provide valuable data, and how to make sense of Big Data and Analytics.

Targeted Groups:

- Statistical and Research Analysts.
- Key Application Development and Data Research Personnel.
- Technology Engineers, CTO, and CIO.
- Strategic Development Directors.

Course Objectives:

At the end of this data science and big data analytics course, the participants will be able to:

- Understand the role of Big Data for their organization.
- Appreciate when to apply Data Analytics and the Best Methods of Approach.
- Consider How to Choose Appropriate Models and Technology for Big Data.
- Learn from case study examples and use case scenarios.
- Successfully achieve results by applying best practices in Data Analytics.

Targeted Competencies:

At the end of this data science and big data analytics training, the target competencies will be able to evolve:

- Big Data Analytics.
- Adaptation and Approach of Lifecycles and Models.
- Methods and Models for Statistical Evaluation.
- Advanced Methods and Models for Big Data Analytics.
- How To Select Appropriate Tools to Achieve the Best from Data Analytics?

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Difference Between Data Science and Big Data Analytics:

Data Science and Big Data Analytics are interconnected fields that extract insights from complex datasets. Data Science encompasses various activities, including statistical analysis and machine learning. At the same time, Big Data Analytics specializes in processing and analyzing large datasets efficiently.

Both disciplines play pivotal roles in making data-driven decisions by uncovering patterns and correlations within extensive datasets. A certification program in Big Data Analytics equips individuals with advanced skills for careers in data-intensive industries like life sciences, where analyzing large-scale biological and clinical data is essential for research and innovation.

Course Content:

Unit 1: Big Data Analytics:

- Current Practices and Trends in Big Data Analytics.
- Business Intelligence v Data Science.
- Analytical Architecture for Big Data.
- Roles for Big Data within the Technology and Commercial Enterprise.
- Key Drivers for Big Data Analytics.

Unit 2: Data Analytics Models and Lifecycle:

- Data Analytics Lifecycle.
- Stages:
    1. Discovery.
    2. Preparation of Data.
    3. Model Planning and Review.
    4. Model Creation.
    5. Communication Plan.
    6. From Planning to Operation.

Unit 3: Data Analytical Methods and Programs Overview:

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- Overview of R Framework.
- Overview of Big Data Analytics.
- Exploratory Data Analysis.
- Statistical Methods of Evaluation.
- Advanced Methods of Clustering.
- Advanced Theory and Methods:

  - Association Rules.
  - Regression.

Unit 4: Advanced Theory and Methods Overview:

- Advanced Analytical Theory:

  - Classification.
  - Time Series Analysis.
  - Textual Analysis.

- Technology and Tools for Advanced Data Analytics.
- Use Case and Assessment.

Unit 5: Technology, Tools, and Achieving Results:

- Unstructured Data Analytics.
- Advanced Analytical Tools in Database Analytics.
- How to Integrate Data Analytics?
- Current Best Practice Management and Approach for Project Delivery.
- Data Visualization Overview.

Conclusion:

Completing a Data Science & Big Data Analytics course provides a comprehensive understanding of both disciplines. Data Science encompasses statistical analysis and machine learning, while Big Data Analytics focuses on efficiently processing and analyzing large datasets.

The course highlights the distinction between Data Science, which covers a broader range of activities, and Big Data Analytics, which specializes in handling extensive datasets. Graduates gain expertise in making data-driven decisions by uncovering insights from complex data.

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Mastering a certification program in Science in Big Data Analytics prepares individuals for careers in data-intensive fields like life sciences, where analyzing large-scale biological and clinical data is vital for research and innovation. Understanding the nuances between Big Data Analytics and Data Science empowers professionals to leverage advanced techniques in data analysis effectively.