MERCURY

Data Science & Big Data Analytics



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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 identify trends and adjust operational procedures to harness the results, to increase revenue and client experience.

This course will provide a practitioner approach to identify 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 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 from applying best practice in Data Analytics

Targeted Competencies:

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

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

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Unit 2: Data Analytics Models and Lifecycle:

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

Unit 3: Data Analytical Methods and Programs Overview:

- Overview of R Framework
- Overview of Big Data Analytics
- Exploratory Data Analysis
- Statistical methods of Evaluation
- Advanced Methods of Clustering
- Advanced Theory and Methods of Association Rules
- Advanced Theory and Methods of Regression

Unit 4: Advanced Theory and Methods Overview:

- Advanced Analytical Theory of Classification
- Advanced Analytical Theory of Time Series Analysis
- Advanced Analytical Theory of 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