MERCURY

Data Analytics for Managerial Decision-Making Training

3 – 7 January 2027
Manama (Bahrain)



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Ref: 9469_266923 **Date:** 3 – 7 January 2027 **Location:** Manama (Bahrain) **Fees:** 4900 Euro

Introduction:

This data analytics for managerial decision-making course will highlight the added value that data analytics can offer professionals as a decision-support tool in management decision-making. It will show how data analytics can support strategic initiatives, inform policy information, and direct operational decision-making.

This data analytics for managerial decision-making course will emphasize data analytics applications in management practice, validate data analytics findings, and clarify the integration of quantitative reasoning into management decision-making. Exposure to data analytics will ultimately promote greater confidence in using evidence-based information to support management decision-making.

Defining Managerial Decision-Making:

The managerial decision-making process is a critical series of steps that enable managers to solve problems and make informed choices. The steps of managerial decision-making, which involve defining the problem, identifying alternatives, evaluating options, and creating a choice, are illuminated by the effective use of data analytics.

This data analytics for managerial decision-making course offers insights into how analytics informs each process stage and enhances managerial decision-making techniques and methods.

Targeted Groups:

- Professionals in management support roles.
- Analysts who typically encounter data / analytical information regularly in their work environment.
- Those who seek to derive more excellent decision-making value from data analytics.

Course Objectives:

At the end of this data analytics for managerial decision-making course, the participants will be able to:

- Appreciate data analytics in a decision support role.
- Explain the scope and structure of data analytics.
- Apply a cross-section of helpful data analytics.
- Interpret meaningfully and critically assess statistical evidence.
- Identify relevant applications of data analytics in practice.

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Targeted Competencies:

Upon the end of this data analytics for managerial decision-making training, the target competencies will be able to:

- Applications of data analytics in management.
- Data analytics.
- Applying data analytical methods through worked examples.
- Focusing on management interpretation of statistical evidence.
- Integrating statistical thinking into the work domain.

Course Content:

Unit 1: Setting the Statistical Scene in Management:

- The quantitative landscape in management.
- Thinking statistically about applications in management identifying KPIs.
- The integrative elements of data analytics.
- Data: The raw material of data analytics types, quality, and data preparation.
- Exploratory data analysis using Excel pivot tables.
- Using summary tables and visual displays to profile sample data.

Unit 2: Evidence-Based Observational Decision-Making:

- Numeric descriptors to profile numeric sample data.
- Central and non-central location measures.
- Quantifying dispersion in sample data.
- Examine the distribution of numeric measures skewness and bimodal.
- Exploring relationships between numeric descriptors.
- Breakdown analysis of numeric measures.

Unit 3: Statistical Decision-Making - Drawing Inferences from Sample Data:

- The foundations of statistical inference.
- Quantifying uncertainty in data - the normal probability distribution.
- The importance of sampling in inferential analysis.
- Sampling methods random-based sampling techniques.
- Understanding the sampling distribution concept.
- Confidence interval estimation.

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Unit 4: Statistical Decision-Making - Drawing Inferences from Hypothesis Testing:

- The rationale of hypothesis testing.
- The hypothesis testing process and types of errors.
- Single population tests tests for a single mean.
- Two independent population tests of means.
- Matched pairs test scenarios.
- Comparing means across multiple populations.

Unit 5: Predictive Decision-Making - Statistical Modeling and Data Mining:

- Exploiting statistical relationships to build prediction-based models.
- Model building using regression analysis.
- Model building process - the rationale and evaluation of regression models.
- Data mining overview - its evolution.
- Descriptive data mining - applications in management.
- Predictive goal-directed data mining - management applications.

Managerial Decision-Making Models:

Managerial decision-making models guide leaders through the complexities of making strategic choices. From the classic rational model to more contemporary data-driven approaches, this course will explore the various managerial decision-making models, highlighting their implications for managerial decision-making and explaining how integrating data analytics can enhance the decision-making process.

Participants will learn to define managerial decision-making within the context of data-driven environments. They will be equipped with the knowledge to avoid common biases in managerial decision-making. By comprehensively examining data analytics for managerial decision-making, participants in this course will understand how to make more effective managerial decisions.

This data analytics for managerial decision-making training course is designed to bridge the gap between abstract statistical concepts and real-world managerial challenges, offering a practical and enlightening journey into the impactful use of data analytics in management.