MERCURY

Effective Business Decisions Using Data Analysis Course

24 – 28 May 2027
Milan (Italy)



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Introduction

Every professional strives to make quality decisions. Quality decisions result from a careful and thorough evaluation of relevant information. Often, such information is generated through statistical manipulation of data. Still, only a few professionals possess the quantitative reasoning skills to meaningfully and validly interpret statistical findings themselves or question the interpretations given by others.

The lack of quantitative analytical skills can limit a professional's effectiveness in making quality decisions by taking business decisions using a data analysis course.

This business decision-using data analysis program aims to develop an appreciation of the role of quantitative methods in management decision-making and, thereby, empower professionals with additional decision-making skills.

Enhancing Business Decisions with Data Analytics

In the realm of modern business, data analytics is to be considered. Utilizing data analysis for making effective business decisions can transform the landscape of management practices. This specialized course segment will specifically hone how data analytics can improve decision-making, emphasizing the criticality of using data to make informed business decisions.

Using a data analysis course, participants in the business decisions will delve into the nuances of data analytics for business decision-making, understanding the methodologies and tools underpinning strategic business foresight.

This business decision using a data analysis course imparts knowledge and bolsters professionals' confidence in using data analytics for decision-making. It will effectively bridge the gap between data and decision, ensuring that professionals emerge as more data-savvy decision-makers capable of using data analytics to help make business decisions.

By engaging in this business decision-making training course, participants can elevate their competency in data analytics for the best business decision-making, learning to wield data as a powerful tool in the competitive business arena.

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

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Course Objectives

At the end of this business decisions using data analysis course, the participants will be able to:

- Appreciate the role of Data Analysis as a Decision Support tool
- Explain the scope and structure of the discipline of Statistics
- Understand the importance of data quality in data analysis
- Select an appropriate Data Analysis methodology to apply to specific management situations
- Apply a cross-section of Data Analysis tools and techniques
- Meaningfully interpret statistical output to inform decision-making
- Critically assess statistical findings with confidence
- Interact meaningfully and with confidence with Data Analysts
- Initiate with confidence in their Data Analysis projects
- Learn techniques to support strategic initiatives

Targeted Competencies

- Discussions on applications of data analytics in management
- The importance of data in 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 Scene and Observational Decision-Making

- Setting the Quantitative Scene
- The Decision Support Role of Quantitative Methods in Management
- Thinking Statistically about Applications in Business Practice
- The Elements and Scope of Quantitative Management
- Data and the Importance of Data Quality

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Unit 2: Using Excel to Paint a Picture of Your Data

- Summary Methods Using Tables and Graphs to Profile Data
- One-way, Two-way, and Multi-way Pivot Tables
- Graphic Displays and Breakdown Analysis
- Numeric Descriptors
- Central and non-central locations Dispersion Distribution Shapes
- Graphical summary using Box plots

Unit 3: Statistical Inferential Decision Making - Harnessing Uncertainty

- Using sample evidence to address management issues through statistical inference
- How to measure and quantify Uncertainty using Probability Distributions
- The importance of Sampling
- Statistical Decision-Making methods
- Approaches: Confidence Intervals and Hypothesis Testing
- Techniques: Z- and T-statistics, Analysis of Variance, Chi-Square
- Addressing Practical Management Issues
- Estimation Testing for Differences in Multiple Sample Comparisons

Unit 4: Predictive Decision Making - Using Models to Build Relationships

- Statistical models exploit statistical relationships between measures to prepare forecasts and make predictions.
- The Value of Statistical Modelling
- Modeling Approaches
- Regression Models, Time Series Analysis Autoregressive Models

Unit 5: Data Mining - A Brief Overview

- An Overview of Data Mining
- Definition of the Data Mining Process Data Preparation
- Data Mining Functions
- Prediction / Estimation / Classification / Descriptive
- Purpose Methodology Interpretation Likely Applications
- Cluster Analysis Discriminant Analysis
- Logistic Regression Classification Trees Neural Networks
- Market Basket Analysis Customer Relationship Management CRM
- Overview of Selected Data Mining Techniques analysis by NCSS
- Descriptive Modeling Segmentation Strategies
- Predictive Modeling Classification Estimation Prediction Strategies
- Typical Applications

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Unit 6: Decision Analysis for Management Judgement

- Using Decision Models to structure/evaluate complex decision scenarios
- Multi-Criteria Decision Modelling Illustrations of Two Practical Tools
- SMART Simple Multi-Attribute Rating Technique
- AHP Analytical Hierarchy Process