Data Analytics for Managerial Decision Making 'Previously published as Effective Business Decisions Using Data Analysis'

Date		($)Fees	
20 July -24 July 2025	SALALA	3200	Register Now

Why Choose this Training Course?

This interactive, applications-driven 5-day course will highlight the added value that data analytics can offer a professional as a decision support tool in management decision making. It will show the use of data analytics to support strategic initiatives; to inform on policy information; and to direct operational decision making. The course will emphasize applications of data analytics in management practice; focus on the valid interpretation of data analytics findings; and create a clearer understanding of how to integrate quantitative reasoning into management decision making. Exposure to the discipline of data analytics will ultimately promote greater confidence in the use of evidence-based information to support management decision making.

This course will feature:

- 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
- How to integrate statistical thinking into the work domain

What are the Goals?

By the end of this course, 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 useful data analytics.
- Interpret meaningfully and critically assess statistical evidence.
- Identify relevant applications of data analytics in practice.

Who is this Training Course for?

This course is suitable to a wide range of professionals but will greatly benefit:

- Professionals in management support roles

- Analysts who typically encounter data / analytical information regularly in their work environment
- Those who seek to derive greater decision making value from data analytics

How will this Training Course be Presented?

This course will utilise a variety of proven adult learning techniques to ensure maximum understanding, comprehension and retention of the information presented. The daily workshops will be highly interactive and participative. This involves regular discussion of applications as well as hands-on exposure to data analytics techniques using Microsoft Excel. Delegates are strongly encouraged to bring and analyse data from their own work domain. This adds greater relevancy to the content. Emphasis is also placed on the valid interpretation of statistical evidence in a management context.

The Course Content

Day One: Setting the Statistical Scene in Management

- Introduction; 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

Day Two: 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

Day Three: 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

Day Four: Statistical Decision Making – Drawing Inferences from Hypotheses Testing

- The rationale of hypotheses 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

Day Five: 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

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