

Business Skills - Introduction to Data Analysis

Code:	1076
Length:	2 days
URL:	View Online

Data analysis and analytics are evolving disciplines. We constantly hear about big data, prediction, AI, and modeling techniques.

However, advanced techniques rest on fundamentals which can be applied in many job roles. This class quickly equips you with that foundation. Whether you're charting your overall business intelligence strategy or performing analysis yourself, these basic tools and techniques rapidly inform effective decision-making. In this fast-paced introductory workshop, we'll examine the history of business intelligence, its relationship to data analysis, and why the two are needed to help businesses deliver a complete assembly of the 'data puzzle'. We'll also address hurdles teams face when dealing with data overload and suggests some possible solutions.

Amid an ongoing explosion of data, there's also a greater need to understand who is qualified to correctly analyze data. We will explore the qualifications of data analysts as well as the analytic tools available for those people to use associated with the position.

Please note: Exercises in this course are not compatible with Excel in a web browser. Please make sure you have a version of Excel locally downloaded on your computer or access to Excel via Microsoft 365.

This course has been submitted, reviewed, and approved by the International Institute of Business Analysis (IIBA) to award CDUs for attendance.

Skills Gained

In this Introduction to Data Analysis Course, you will:

- Measure business performance.
- Identify improvement opportunities for business processes.
- Describe the need for tracking and identifying the root causes of deviation or failure.
- Use the principles, properties, and application of Probability Theory.
- Discuss data distribution including central tendency, variance, normal distribution, and non-normal distributions.
- Draw conclusions about a data population using statistical inference.
- Forecast trends using simple linear regression analysis.
- Perform accurate analysis after learning about sample sizes and confidence intervals and limits, and how they influence the accuracy of your analysis.
- Explore different methods and easy algorithms for forecasting future results and to reduce current and future risk.

Who Can Benefit

Anyone involved in operations, project management, business analysis, or management who needs an introduction to data analysis, would benefit from this class.

Course Details

1. Course Introduction

- Logistics, materials, and course expectations
- Agile and integrated (A&I) set of tools and best practices
- References and resources

2. Introduction to Data Analysis and Analytics

- Definition and history
- Current technology, the growing availability of data, and increasing challenges
- Applications for gaining competitive advantages

3. Rethinking the Value and Usage of Data

- The impact of vast volumes of available data especially for decision making
- Data difficulties and limitations: ROI vs. effort/expense, incomplete and inconclusive data
- Dealing with data uncertainty
- Getting real value out of your data: The data continuum
- Effective and responsible data ownership
- Advantages and disadvantages of qualitative and quantitative data types
- Solutions and best practices to transform the way your organization accesses and uses data
- Organizing the entire organization's data for maximum efficiency using easily available tools
- Taking advantage of the expertise of the entire organization

4. Introduction to Data Mining and Data Warehousing

- Data Mining concepts and application
- Application benefits of data warehousing

5. Data Distribution and Variance

- Decision making under uncertainty
- Probability
- Data distribution
- Variance
- Standard deviation

6. Information Needs

- Operational and executive information classes
- Key functional transactions and documents
- Map information needs to underlying data

- Executive information needs and the balanced scorecard
- Role of the business analyst and data analyst
- How to use simple pivot tables in Excel or Google Sheets to analyze and present your data
- Tracking and managing business process performance
- Learning from data

7. Data Exploration Concepts and Methods

- Basic concepts
- Descriptive measures of a sample
- Histograms
- Statistical hypothesis and inference
- Dependence and correlation
- Moving beyond data and decision uncertainty - managing risk

8. Forecasting

- Forecasting methods and models
- Time series analysis
- Linear regression
- Establishing trends and business cycles (i.e., seasonality)
- Selecting independent variables for predictive models including regression techniques

9. Review, Best Practices, and Next Steps

- Data analysis and transformation
- Best practices revisited
- Next steps options

10. Course Closeout: Putting It All Together. The Value of Powerful Data

11. Additional Resources and Exercises

Download Whitepaper: Accelerate Your Modernization Efforts with a Cloud-Native Strategy
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