skillsoft global knowledge™

DATA ANALYSIS BOOT CAMP

Course Code: 2397

Learn practical, hands-on data analysis skills.

This three-day course, organized into key topic areas, leverages straightforward business examples to explain practical techniques for understanding and reviewing data quality. You will learn how to make more informed, intelligent business decisions by analyzing data using Excel functions and the R programming language.

You will get an overview of data quality and data management, followed by foundational analysis and statistical techniques. Throughout the course, you will learn to communicate about data and findings to stakeholders who need to quickly make decisions that drive your organization forward.

In–Class Exercises, Demos, and Real-World Case Studies

This data analyst training class is a lively blend of expert instruction combined with hands-on exercises so you can practice new skills. Leave prepared to start performing practical analysis techniques the moment you return to work. Every Data Analysis Boot Camp instructor is a veteran consultant and data guru who will guide you through effective best practices and easily accessible technologies for working with your data. Through a combination of demonstrations and hands-on practice, you will learn to use data analysis techniques, which are typically the domain of expensive consultants.

*Please note, if you are taking this class as part of the St. Louis University Certificate requirements, there is a $500 fee to claim your certificate once you have completed ALL requirements.

What You'll Learn

- Identify opportunities, manage change and develop deep visibility into your organization
- Understand the terminology and jargon of analytics, business intelligence, and statistics
- Learn a wealth of practical applications for applying data analysis capability
- Visualize both data and the results of your analysis for straightforward

graphical presentation to stakeholders
- Learn to estimate more accurately than ever, while accounting for variance, error, and Confidence Intervals
- Practice creating a valuable array of plots and charts to reveal hidden trends and patterns in your data
- Differentiate between "signal" and "noise" in your data
- Understand and leverage different distribution models, and how each applies in the real world
- Form and test hypotheses – use multiple methods to define and interpret useful predictions
- Learn about statistical inference and drawing conclusions about the population

Who Needs to Attend

This data analysis training course is designed for the following professions:

- Business Analyst, Business Systems Analyst, CBAP, CCBA
- Systems, Operations Research, Marketing, and other Analysts
- Project Manager, Program Manager, Team Leader, PMP, CAPM
- Data Modelers and Administrators, DBAs
- IT Manager, Director, VP
- Finance Manager, Director, VP
- Operations Supervisor, Manager, Director, VP
- Risk Managers, Operations Risk Professionals
- Process Improvement, Audit, Internal Consultants and Staff
- Executives exploring cost reduction and process improvement options
- Job seekers and those who want to show dedication to process improvement
- Senior staff who make or recommend decisions to executives

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CLASSROOM LIVE	$2,350 CAD	3 Day

Classroom Live Outline

Part 1: Data Fundamentals

1. Course Overview and Level Set
   - Objectives of the Class
   - Expectations for the Class
2. Understanding “Real-World” Data
   - Unstructured vs. Structured
   - Relationships
   - Outliers
   - Data growth
3. Types of Data
   - Flavors of Data
   - Sources of Data
   - Internal vs. External Data
   - Time Scope of Data (Lagging, Current, Leading)
4. LAB: Get Started with our Classroom Data

5. Data-Related Risk
   - Common Identified Risks
   - Effect of Process on Results
   - Effect of Usage on Results
   - Opportunity Costs, Tool Investment
   - Mitigation of Risk
6. Data Quality
   - Cleansing

- Duplicates
- SSOT
- Field standardization
- Identify sparsely populated fields
- How to fix common issues

7. LAB: Data Quality

Part 2: Analysis Foundations

1. Statistical Practices: Overview
    - Comparing Programs and Tools
    - Words in English vs. Data
    - Concepts Specific to Data Analysis
    - Domains of Data Analysis
    - Descriptive Statistics
    - Inferential Statistics
    - Analytical Mindset
    - Describing and Solving Problems

Part 3: Analyzing Data

1. Averages in Data
    - Mean
    - Median
    - Mode
    - Range
2. Central Tendency
    - Variance
    - Standard Deviation
    - Sigma Values
    - Percentiles
    - Use Concepts for Estimating
3. LAB: Hands-On – Central Tendency
4. Analytical Graphics for Data

5. Categorical
    - Bar Charts
6. Continuous
    - Histograms
7. Time Series
    - Line Charts
8. Bivariate Data

- Scatter Plots

9. Distribution
    - Box Plot

Part 4: Analytics & Modeling

1. Overview of Commonly Useful Distributions
    - Probability Distribution
    - Cumulative Distribution
    - Bimodal Distributions
    - Skewness of Data
    - Pareto Distribution
    - Correlation
    - LAB: Distributions
    - Predictive Analytics
    - A Discussion about Patterns
    - Regression and Time Series for Prediction
    - LAB: Hands-On – Linear Regression
    - Simulation
    - Pseudo-random Sequences
    - Monte Carlo Analysis
    - Demo / Lab: Monte Carlo in Excel
2. Understanding Clustering
3. Segmentation
4. Common Algorithms
5. K-MEANS

Part 5: Hands-On Introduction to R and R Studio

1. R Basics
2. Descriptive Statistics
3. Importing and Manipulating Data
4. R Scripting
5. Data Visualization with R
6. Regression in R

7. K-MEANS in R

8. Monte Carlo in R

9. Demo/Lab: Hands-on R work

Part 6: Visualizing & Presenting Data

1. Goals of Visualization
    - Communication and Narrative
    - Decision Enablement
    - Critical Characteristics
2. Visualization Essentials
    - Users and Stakeholders
    - Stakeholder Cheat Sheet
    - Common Missteps
3. Communicating Data-Driven Knowledge
    - Alerting and Trending
    - To Self-Serve or Not
    - Formats & Presentation Tools
    - Design Considerations

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VIRTUAL CLASSROOM LIVE	$2,350 CAD	3 Day

Virtual Classroom Live Outline

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   - Outliers
   - Data growth
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   - Flavors of Data
   - Sources of Data
   - Internal vs. External Data
   - Time Scope of Data (Lagging, Current, Leading)
4. LAB: Get Started with our Classroom Data

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   - Common Identified Risks
   - Effect of Process on Results
   - Effect of Usage on Results
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- Duplicates
- SSOT
- Field standardization
- Identify sparsely populated fields
- How to fix common issues

7. LAB: Data Quality

Part 2: Analysis Foundations

1. Statistical Practices: Overview
    - Comparing Programs and Tools
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    - Simulation
    - Pseudo-random Sequences
    - Monte Carlo Analysis
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Part 5: Hands-On Introduction to R and R Studio

1. R Basics
2. Descriptive Statistics
3. Importing and Manipulating Data
4. R Scripting
5. Data Visualization with R
6. Regression in R

7. K-MEANS in R

8. Monte Carlo in R

9. Demo/Lab: Hands-on R work

Part 6: Visualizing & Presenting Data

1. Goals of Visualization
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    - Decision Enablement
    - Critical Characteristics
2. Visualization Essentials
    - Users and Stakeholders
    - Stakeholder Cheat Sheet
    - Common Missteps
3. Communicating Data-Driven Knowledge
    - Alerting and Trending
    - To Self-Serve or Not
    - Formats & Presentation Tools
    - Design Considerations

Sep 15 - 17, 2025 | 12:00 - 8:00 PM EDT

Dec 3 - 5, 2025 | 8:30 AM - 4:30 PM EST

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PRIVATE GROUP TRAINING	3 Day

Visit us at www.globalknowledge.com or call us at 1-866-716-6688.

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