Data Analytics and Storytelling

2 Days | Virtual and Face-to-Face

Organizations need to gain insight into past trends, predict future behaviors, and identify opportunities that will allow them to stay ahead of their competition. Accomplishing this requires developing insights from vast stores of data. Data analytic techniques are used to collect, analyze, and interpret large datasets to find patterns, trends, and correlation in support of decision-making by management team members. This course provides a foundation in practical analytics tasks including problem definition, data collection, cleansing, manipulation, and analysis.

Once data has been analyzed and conclusions have been drawn, the results must be presented in a concise, compelling manner. Students will learn best practices for visually and verbally presenting the results of data analytics using a data storytelling framework.

Facilitator-led workshops allow students to practice the techniques as they learn. Students are encouraged to bring their own projects to class.

Learning Objectives

- Understand the strategic and operational value of data and data analytics
- Leverage data analysis to improve the decision-making process
- Define the problem to solve and form a working hypothesis
- Identify data sources and create analytical datasets
- Perform statistical analysis to test the hypothesis
- Develop a compelling visual representation to share analytical results
- Build a story around the visualization that will draw attention
- Integrate ethical considerations into the data analysis and decision-making process

Intended Audience

This course is designed for business analysts, project managers, decision-makers, systems analysts, data administrators, data scientists, database administrators, business intelligence analysts, or any other project team member practicing business analysis. This course may also be appropriate for individuals who manage or mentor business analysts or data analysts.

Prerequisites

While there are no specific course prerequisites, students should be familiar with basic concepts related to capturing, storing, and retrieving data from corporate data sources such as relational databases and spreadsheets. Students should be comfortable manipulating data and developing charts in Excel.

Learning Topics

Topic
Introduction
• Define data analytics
• Differentiate between business data analysis, data analytics, and data science
• Distinguish between exploratory and explanatory data analysis
• Learn a data analytics framework
Understanding the Problem to Solve
• Identify an appropriate problem to solve or question to answer with data analysis
• Establish the analytical goal / objectives
• Create a hypothesis
• Determine what data is needed
• **Workshop: Using a case study or the student's own project, develop an analytic approach to a problem or question**
Collecting and Storing the Data
• Understand common types of data
• Understand common types of data storage
• **Workshop: Combine disparate datasets needed for analysis**
Cleaning the Data
• Approaches to data cleansing
• Removing, modifying, and formatting data
• **Workshop: Prepare a dataset that is ready for analysis**
Data Analysis Techniques

• Learn various common techniques for analyzing data:
 	
    ○ Cluster analysis   ○ Time series analysis
    ○ Regression analysis   ○ Sentiment analysis
    ○ Cohort analysis   ○ Dispersion analysis
    ○ Monte Carlo simulations ○ Neural network analysis
    ○ Factor analysis   ○ Decision trees

• **Workshop: Perform data analysis on the prepared dataset**
Business Intelligence, Machine Learning and Artificial Intelligence Basics
• Definitions
• Trends
• How BI/ML/AI apply to data analytics

Data Storytelling
• Establish the context for a data "story"

- Learn to capture attention and focus your intent with data
- Review the basic types of charts and graphs that most effectively tell your story
- **Exercise: Critique data visualizations**
- Apply design principles to data visualizations
- **Exercise: Design a data visualization**
- Ensure integrity in data findings
- **Workshop: Apply learned principles to develop a presentation that delivers a concise, compelling call to action based on data findings**

Course Summary

- Course retrospective
- Develop a Post Class "Go Do It!" Plan with next steps for the student's current project

BA Certified

This class is a part of the **B2T Training Business Analyst Certification Program**. For more information on the program, please see our [Certification](#) page.