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
• Understand the importance of business data • Distinguish between qualitative and quantitative data • Discuss the need for data analytics
Types of Data Analysis
• Differentiate between business data analysis, data analytics, and data science • Understand the relationship between business analysis and data analytics
Define the Problem
• Learn a data analytics framework based on the scientific method • Distinguish between inductive and deductive reasoning • Develop examples of the four major data analytic methods • **Workshop: Identify an appropriate problem to solve or question to answer with data analysis**
Collecting and Storing the Data
• Understand common types and sources of data • Understand common types of data storage • Approaches to data cleansing • Removing, modifying, and formatting data • **Workshop: Cleanse and prepare a dataset for analysis**
Statistics and Data Analysis Techniques
• Learn various common techniques for analyzing data: ○ Mean, median, and mode ○ Cluster analysis ○ Regression analysis ○ Cohort analysis ○ Monte Carlo simulations ○ Factor analysis ○ Standard deviation ○ Time series analysis ○ Sentiment analysis ○ Dispersion analysis ○ Neural network 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 • 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

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