



Data Analytics and Storytelling

AI-Assisted 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 large stores of data. Data analytic techniques are used to collect, analyze, and interpret data to find patterns, trends, and correlations that support better business decision-making.

Artificial intelligence can help analysts accelerate data analytics work. However, effective data analytics still depends on human judgment, business context, reliable data, sound analysis techniques, and careful interpretation of results.

This course provides a foundation in practical analytics tasks, including problem definition, data collection, data cleansing, data manipulation, analysis, visualization, and storytelling. Participants learn how to define the problem to solve, form a working hypothesis, identify and prepare analytical datasets, apply analysis techniques, and communicate findings in a clear and compelling way.

Using a case study or real-life initiative, participants engage in hands-on workshops throughout the course. AI is used as an integral part of the workshops to accelerate and enhance analysis work. Participants apply the B2T AI Review Framework to evaluate AI-generated content before it is used to support analytical conclusions, visualizations, recommendations, or business decisions.

NOTE: If you prefer our version of this course that teaches Data Analytics and Storytelling independent of AI, please review our [original course outline](#).

Learning Objectives

- Understand the strategic and operational value of data and data analytics
- Use AI to accelerate problem definition, data preparation, analysis, visualization, and storytelling activities
- 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
- Recognize data quality issues that may affect analysis results
- Perform statistical analysis to test the hypothesis
- Distinguish between AI-generated suggestions and evidence-based analytical conclusions
- Develop a compelling visual representation to share analytical results
- Build a story around the visualization that draws attention to the right message
- Ensure integrity in data findings, visualizations, and recommendations
- Apply the B2T AI Review Framework to validate AI-generated content before it influences analytical conclusions or business decisions



Intended Audience

This course is designed for business analysts, project managers, decision-makers, systems analysts, data administrators, data scientists, database administrators, business intelligence analysts, product owners, product managers, and other project team members involved in business analysis, data analysis, reporting, analytics, or decision support.

This course may also be appropriate for individuals who manage or mentor business analysts or data analysts. Access to an AI tool such as Microsoft Copilot or ChatGPT is needed.

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.

B2T AI Review Framework

Throughout this course, participants apply the B2T AI Review Framework whenever AI is used to support analysis activities. The framework helps analysts use AI to accelerate analysis work while ensuring that business decisions are grounded in human judgment, business context, and appropriate governance.

The framework follows a four-step cycle:

AI Generates – AI produces draft content, analysis artifacts, recommendations, or alternative approaches.

Human Checkpoint – The output is evaluated for accuracy, completeness, business context alignment, and practical usability.

Refine – The analyst improves the output through additional prompting, analysis, stakeholder input, and professional judgment.

Approve – The appropriate stakeholder reviews the information and determines the next course of action. The analyst provides the context and supporting information needed to enable effective decision-making.

Each AI-Assisted Workshop includes opportunities to apply this framework so participants learn to use AI as an analysis accelerator while providing the judgment, context, and expertise needed to deliver effective business solutions.



Learning Topics

Topic
Introduction
• Understand the importance of business data • Distinguish between qualitative and quantitative data • Discuss the need for data analytics • Understand how analytics can support strategic and operational decisions • Discuss how AI can assist with data analytics and storytelling • Discuss appropriate and inappropriate uses of AI when analyzing data • AI-Assisted Workshop: ○ Review source material for a case study or participant's initiative ○ Identify possible business questions, data sources, stakeholders, and questions for follow-up ○ AI Review Checkpoint
Types of Data Analysis
• Differentiate between business data analysis, data analytics, and data science • Understand the relationship between business analysis and data analytics • AI-Assisted Workshop: ○ Use AI to identify possible analytical questions ○ Identify which questions are appropriate for the available data and business context ○ Review AI-generated suggestions for assumptions, overreach, missing context, and practical usefulness ○ AI Review Checkpoint
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 • AI-Assisted Workshop: ○ Use AI to draft possible problem statements, analytical questions, and working hypotheses ○ Identify assumptions, constraints, stakeholders, and possible measures of success ○ Refine the problem statement so the analysis is focused and useful ○ AI Review Checkpoint



Collecting and Storing the Data

- Understand common types and sources of data
- Understand common types of data storage
- Review approaches to data cleansing
- Remove, modify, and format data to prepare it for analysis
- Identify data quality issues, missing values, inconsistent formats, and questionable data
- AI-Assisted Workshop:
 - Use AI to identify possible data sources, data quality concerns, and preparation steps
 - Cleanse and prepare a dataset for analysis
 - [AI Review Checkpoint](#)

Statistics and Data Analysis Techniques

- Learn common techniques for analyzing data:
 - Mean, median, and mode
 - Standard deviation
 - Dispersion analysis
 - Cluster analysis
 - Regression analysis
 - Cohort analysis
 - Time series analysis
 - Sentiment analysis
 - Factor analysis
 - Monte Carlo simulations
 - Neural network analysis
 - Decision trees
- AI-Assisted Workshop:
 - Use AI to suggest possible analysis techniques for the prepared dataset
 - Perform data analysis on the prepared dataset
 - Identify patterns, trends, outliers, correlations, and questions for further analysis
 - Review AI-generated interpretations for unsupported conclusions, mistaken correlations, missing context, and statistical overreach
 - [AI Review Checkpoint](#)

Business Intelligence, Machine Learning, and Artificial Intelligence Basics

- Define business intelligence, machine learning, and artificial intelligence
- Discuss trends in BI, ML, and AI
- Understand how BI, ML, and AI apply to data analytics
- Recognize where AI can support analytics work and where human review is required
- Discuss risks related to AI-generated summaries, analysis recommendations, visualizations, and conclusions



Data Storytelling

- Establish the context for a data story
- Learn to capture attention and focus the message with data
- Review the basic types of charts and graphs that most effectively tell the story
- Apply design principles to data visualizations
- Develop a compelling visual representation to share analytical results
- AI-Assisted Workshop:
 - Use AI to design or refine a data visualization
 - Draft possible storylines, titles, labels, and talking points for analytical findings
 - Identify where the visual could mislead or imply unsupported conclusions
 - [AI Review Checkpoint](#)
- Build a story around the visualization that draws attention to the right message
- Ensure integrity in data findings, visualizations, and conclusions
- AI-Assisted Workshop:
 - Apply learned principles to develop a presentation that delivers a concise, compelling call to action based on data findings
 - Use AI to refine the message for a specific audience
 - Review the final story for accuracy, clarity, business relevance, and ethical presentation of the data
- [AI Review Checkpoint](#)

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.