



Data Visualization for Professionals

PROGRAM OVERVIEW

Your data and your message are what must be heard over the noise. The pace and significance of even routine business operations demand accurate and timely translation of data into actionable content. Analysts and managers at all levels collect, develop, and interpret enormous amounts of raw data, place it in the appropriate context, and offer meaningful conclusions for decision-making. Some will take action into their own hands, and others will advance recommendations to the next level. In both situations, the information and the derived conclusions must be tailored to corporate needs and must be accurate and compelling.



"I was very pleased with the course and will use the notes and spreadsheets to continue my studies as I get better at data analysis and visualization."

"This helped show me some different ways of displaying data visually for senior leaders. I am working on one of my reports to change up those pivot tables now!"

"...Very informative and enhanced skills for managing data at any unit level. Using logistics data was a great touch."



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INTRODUCTION

The rapid pace of information technology (IT) has created faster and cleaner ways to work data, but the individuals behind the scenes must know how to use it. Regular staff or individual training often cannot keep pace using the tools being made available. CANA is keenly aware that businesses are spending tremendous amounts of time collating and dissecting their data, drawing conclusions without full context, and then using stale or ineffective presentation methods.

Many commonly available training courses to improve a team's data visualization skills are generic, at best, or simply tedious. Commercial training packages just don't stay with the trainee nor meet organizational needs. The unique aspects of a company's organic data - the tailored acronyms, collection methods, and diverse and specialized sources - are what make data, and learning about data, meaningful. **When data is meaningful, it is “sticky,” and it stays.**

Several agencies have recognized this challenge and have asked CANA for a solution. Their positive experiences collaborating with CANA in past analytics efforts were proof that CANA explored their data and could **weave that organizational data into effective, customized, and relevant team training sessions.** CANA developed live and interactive training courses in data visualization specifically tailored to these organizations with the sources and data they use on a regular basis.

“I've attended many courses on Excel. All of them teach how to use charts, but this is the first one that discussed when to use charts and which charts are appropriate or not appropriate for the intended message.”

DATA VISUALIZATION FOR PROFESSIONALS



Good data analysis requires the ability to bring the important information into focus.

PROBLEMS

CANA recognizes there are several day-to-day analytics and visualization challenges commonly faced by most commercial organizations:

- Members of the organization **are only familiar with the basics** of traditionally available packages like *Microsoft Excel* and *PowerPoint*.
- The size and scope of data to be presented is **unmanageable or unwieldy** using commonly known techniques.
- Data drives decisions, and poorly presented or erroneous data can diminish presentation impact and relevance.
- The pace of today's digital and global operations often **requires rapid collection, assimilation, and interpretation of data** - often within hours.
- **Inaccurate data and erroneous interpretations can wreak havoc** in organizations, potentially costing enormous amounts of money and other resources.



Data that is crisp, understandable, and interactive is **powerful data**.

SOLUTION

CANA has developed a highly customized, two-day, live data visualization course. Day One focuses on how to develop a critical eye for data and how to translate data into an effective and compelling visual medium. Students learn why clean data is so important and what specific steps are taken to achieve it. Class participants dissect and discuss good and bad examples of data visualization. Day Two is hands-on learning for each student, utilizing applicable organizational data sources within *Excel* and *Power Query*. The second day begins with data cleansing and organization, moves on to building pivot tables and making assessments, and ends with creating and presenting interactive, colorful, dashboards, graphs, and charts.

The practical application is specific to the organization: its data, its standards, its programs.

This reduces the need for training hours spent on extraneous explanation and increases student understanding and retention. Potentially tens of thousands of rows and columns of disparate and intimidating logistics datum are transformed into adaptable, interactive, and powerful visualizations and user dashboards. Even better, students can replicate the processes and results over and over, in their own time, with their own data. Each iteration makes for an improved analyst and better analysis.

COURSE RESULTS

CANA's Data Visualization course provides real-world use cases and proven strategies:

- Given a **messy** dataset, students can **cleanse data and detect issues** such as missing, duplicate, or erroneous data. Students can demonstrate principles of "*tidy*" data by reformatting cumbersome data structures.
- Students can **summarize data in a dataset with key statistics and appropriate graphics**.
- Students can **define clear goals and Key Performance Indicators (KPIs)** related to their specific department's dataset and related dashboard.
- Students can **frame analytical results in the real-world context of their organization**.
- Students can tell a story with **data visualization tailored to the interests and needs of their audience**.





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