

COMPETENCIES

4033.2.1 : Storytelling with Data

The graduate communicates data insights to technical and nontechnical audiences.

4033.2.2 : Data Visualizations and Representations

The graduate creates data representations to offer insight into an organizational problem.

4033.2.3 : Dashboards

The graduate designs interactive dashboards to support executive decision-making.

INTRODUCTION

The data analyst's job does not end once the data has been analyzed. A vital skill for data analysts is to represent and report the data to stakeholders. In this task, you will demonstrate your ability to identify actionable insights from data and communicate them using effective storytelling methods.

This task consists of three parts:

In part 1, you will use Tableau to create an interactive data dashboard to support executive decision-making. Your dashboard should enable leaders to explore the data, identify trends, and compare key metrics. Your dashboard will feature a variety of interactive reports and data representations and will be accessible to individuals with colorblindness.

Your dashboard will integrate data from two sources:

1. Provided dataset: You will select **one** of the datasets and associated data dictionaries from the following link:

[D210 Data Files and Associated Dictionary Files](#)

It is recommended, but not required, that you choose the same data set that you used to complete your performance assessments in previous courses. Be sure to review the data dictionary associated with the provided data set you selected for additional background details about the data and the audience.

2. Additional data set: You will identify an external, public data set as an additional data set for your dashboard. This data set should contain data and variables that complement the data set you chose from the provided options and should enhance the insights you can gain from the provided data set. Recommended sources include U.S. Census data, Kaggle, or other public data repositories. You are responsible for ensuring that you have the rights to use the data set.

In part 2, you will give a simulated presentation to a panel of peers. You will identify actionable insights from the data and communicate these insights to a technical audience using effective

storytelling methods. In your presentation, you should employ tactics to engage the audience and ensure that a meaningful message has been delivered.

In part 3, you will write a reflection paper to demonstrate your understanding of the techniques and value of data representation and reporting.

Refer to the data dictionary for your chosen provided data set for additional background information about the audience of your data representations.

REQUIREMENTS

Your submission must be your original work. No more than a combined total of 30% of the submission and no more than a 10% match to any one individual source can be directly quoted or closely paraphrased from sources, even if cited correctly. The originality report that is provided when you submit your task can be used as a guide.

You must use the rubric to direct the creation of your submission because it provides detailed criteria that will be used to evaluate your work. Each requirement below may be evaluated by more than one rubric aspect. The rubric aspect titles may contain hyperlinks to relevant portions of the course.

*Tasks may **not** be submitted as cloud links, such as links to Google Docs, Google Slides, OneDrive, etc., unless specified in the task requirements. All other submissions must be file types that are uploaded and submitted as attachments (e.g., .docx, .pdf, .ppt).*

Part 1: Interactive Data Dashboard

Note: Your responses to the task prompts must be provided in a document file. Unless otherwise specified, responses to PA requirements that are included in a python or R studio notebook will not be accepted.

- A. In a document file, do the following:
 1. Provide a copy of your interactive Tableau dashboard to support executive decision-making. Your dashboard must be accessible to users with colorblindness and must include the components in *each* of the following bullet points:
 - data integrated from two sources: **one** of the provided data sets and **one** additional external, public data set
 - **four** different data representations to summarize the data or display trends
 - **two** different interactive controls that allow the user to modify the presentation of data
 - **two** different metrics or key performance indicators computed using data from both chosen data sets
 2. Provide *both* data sets that serve as the data source for the dashboard.
 3. Provide step-by-step instructions to guide users through the dashboard installation.
 4. Provide instructions to help users navigate the dashboard.

Note: Make sure to save your dashboard as a .twbx file.

Part 2: Storytelling with Data

Note: Your responses to the task prompts must be provided in a document file. Unless otherwise specified, responses to PA requirements that are included in a python or R studio notebook will not be accepted.

- B. In a document file, provide a link to a Panopto multimedia presentation in which you tell a story about the data to an audience of data analytics peers. Your presentation should implement elements of effective storytelling and include *each* of the following elements:
- an introduction of yourself and your background
 - a summary of *both* chosen data sets and the context in which they occur
 - an outline of key results from your analysis of the two data sets
 - **two** different data representations to serve as supporting evidence for your results
 - a summary of actionable insights based on your results

Note: Your two data representations may come directly from your Tableau dashboard created in part A.

The audiovisual recording should feature you presenting the material on screen (i.e., not in voiceover or embedded video) and should simultaneously capture both you and your multimedia presentation.

For instructions on how to access and use Panopto, use the "Panopto How-To Videos" web link provided below. To access Panopto's website, navigate to the web link titled "Panopto Access," and then choose to log in using the "WGU" option. If prompted, log in using your WGU student portal credentials, and then it will forward you to Panopto's website.

To submit your recording, upload it to the Panopto drop box titled "Representation and Reporting – NAMx | D210." Once the recording has been uploaded and processed in Panopto's system, retrieve the URL of the recording from Panopto and copy and paste it into the Links option. Upload the remaining task requirements using the Attachments option.

Part 3: Reflection Paper

Note: Your responses to the task prompts must be provided in a document file. Unless otherwise specified, responses to PA requirements that are included in a python or R studio notebook will not be accepted.

- C. In a document file, write a reflection paper to demonstrate your understanding of data representation and reporting by doing the following:
1. Explain how the purpose and function of your dashboard align with the needs outlined in the data dictionary associated with your chosen data set.
 2. Explain how the variables in the additional data set enhance the insights that can be drawn from the data set you chose from the provided options.
 3. Explain **two** different data representations from your dashboard and how executive leaders can use them to support decision-making.
 4. Explain **two** interactive controls in your dashboard and how *each* enables the user to modify the presentation of the data.
 5. Describe how you built your dashboard to be accessible for individuals with colorblindness.
 6. Explain how **two** data representations in your presentation support the story you wanted to tell.
 7. Explain how you used audience analysis to adapt the message in your presentation.
 8. Describe how you designed your presentation for universal access by *all* audiences.

- 9. Explain **two** elements of effective storytelling that you implemented in your presentation and how *each* element was intended to engage the audience.
- D. Acknowledge sources, using in-text citations and references, for content that is quoted, paraphrased, or summarized.
- E. Demonstrate professional communication in the content and presentation of your submission.