

# EBN2 — EBN2 TASK 2: DATA ANALYSIS REPORT

DATA SCIENCE CAPSTONE — D606

PRFA — EBN2

Preparation

**Task Overview**

Submissions

Evaluation Report

## COMPETENCIES

### 4166.1.2: Implements a Data Analytics Approach

The learner implements a data analytics approach to address a business problem.

## INTRODUCTION

Before starting this task, ensure that Task 1 has been approved by a course mentor. If Task 1 has not been approved, your Task 2 submission will be returned without evaluation.

In this task, you will address the real-world research question you identified in Task f1. You will gather relevant data, analyze the data, and recommend a data science solution. This recommendation will be included in a report that you will write, summarizing the key details of your analysis.

*Note: You must successfully pass Task 1 before you begin working on Task 2. However, in practice, your topic, data scope, and research question may change based on your findings as you complete your research. Your work on Task 2 may lead you to recognize that more data is needed and that it must be approved data. For this reason, you may need to update your Task 1 forms before Task 2 is complete.*

*Note: Any information that would be considered confidential, proprietary, or personal in nature should not be included in the actual task submission to WGU. Do not include the actual names of people, suppliers, or companies, or other identifiable information. Fictional names should be used where necessary. Company-specific data, including financial information, should not be included but should be addressed in a general fashion, as appropriate.*

## REQUIREMENTS

Your submission must represent your original work and understanding of the course material. Most performance assessment submissions are automatically scanned through the WGU similarity checker. Students are strongly encouraged to wait for the similarity report to generate after uploading their work and then review it to ensure Academic Authenticity guidelines are met before submitting the file for evaluation. See [Understanding Similarity Reports](#) for more information.

### Grammarly Note:

Professional Communication will be automatically assessed through Grammarly for Education in most performance assessments before a student submits work for evaluation. Students are strongly encouraged to review the Grammarly for Education feedback prior to submitting work for evaluation, as the overall submission will not pass without this aspect passing. See [Use Grammarly for Education Effectively](#) for more information.

### Microsoft Files Note:

Write your paper in Microsoft Word (.doc or .docx) unless another Microsoft product, or pdf, is specified in the task directions. Tasks may not be submitted as cloud links, such as links to Google Docs, Google Slides, OneDrive, etc. All supporting documentation, such as screenshots and proof of experience, should be collected in a pdf file and submitted separately from the main file. For more information, please see [Computer System and Technology Requirements](#).

*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.*

Create a report by doing the following:

### Research Question

- A. Summarize the real-data research question you identified in Task 1. Your summary should include justification for the research question you identified in Task 1, a description of the context in which the research question exists, and a discussion of your hypothesis.

### Data Collection

- B. Report on your data-collection process by describing the relevant data you collected, discussing **one** advantage and **one** disadvantage of the data-gathering methodology you used, and discussing how you overcame any challenges you encountered during the process of collecting your data.

### Data Extraction and Preparation

- C. Describe your data-extraction and data-preparation process, and provide screenshots to illustrate *each* step. Explain the tools and techniques you used for data extraction and data preparation, including how these tools and techniques were used on the data. Justify why you used these particular tools and techniques, including **one** advantage and **one** disadvantage when they are used with your data-extraction and data-preparation methods.

### Analysis

- D. Report on your data analysis process by describing the analysis technique(s) you used to appropriately analyze the data. Include the calculations you performed and their outputs. Justify how you selected the analysis technique(s) you used, including **one** advantage and **one** disadvantage of *each* technique.

### Data Summary and Implications

- E. Summarize the implications of your data analysis by discussing the results of your data analysis in the context of the research question, including **one** limitation of your analysis. Within the context of your research question, recommend a course of action based on your results. Then propose **two** directions or approaches for future study of the dataset.
- F. Acknowledge sources, using in-text citations and references, for content that is quoted, paraphrased, or summarized.
- G. Demonstrate professional communication in the content and presentation of your submission.

### File Restrictions

File name may contain only letters, numbers, spaces, and these symbols: ! - \_ . \* ' ( )

File size limit: 200 MB

File types allowed: doc, docx, rtf, xls, xlsx, ppt, pptx, odt, pdf, csv, txt, qt, mov, mpg, avi, mp3, wav, mp4, wma, flv, asf, mpeg, wmv, m4v, svg, tif, tiff, jpeg, jpg, gif, png, zip, rar, tar, 7z

## RUBRIC

#### A:RESEARCH QUESTION

<p><b>NOT EVIDENT</b></p> <p>A summary of the research question is not provided.</p>	<p><b>APPROACHING COMPETENCE</b></p> <p>The summary of the research question does not include justification for the question, a description of the context, or a discussion of the hypothesis. 1 or more of these elements do not align with each other, or the hypothesis is implausible, given the research question.</p>	<p><b>COMPETENT</b></p> <p>The summary of the research question includes justification for the question, a description of the context, and a discussion of the hypothesis. <i>Each</i> of these elements aligns with the others, and the hypothesis is plausible, given the research question.</p>
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#### B:DATA COLLECTION

<p><b>NOT EVIDENT</b></p> <p>A report on the data-collection process is not provided.</p>	<p><b>APPROACHING COMPETENCE</b></p> <p>The report on the data-collection process does not include a description of the data collected, a discussion of 1 advantage and 1 disadvantage of the methodology used, or a discussion of how challenges in the process were overcome. 1 or more of these elements do not align with each other, or the methodology used was inappropriate for the data collected.</p>	<p><b>COMPETENT</b></p> <p>The report on the data-collection process includes a description of the data collected, a discussion of 1 advantage and 1 disadvantage of the methodology used, and a discussion of how challenges in the process were overcome. <i>Each</i> of these elements align with each other, and the methodology used was appropriate for the data collected.</p>
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#### C:DATA EXTRACTION AND PREPARATION