**ALY6070: Initial Analysis**

**Purpose of Assignment (WHY)**

Communicating complex data information and insights through storytelling with data visualizations using dashboards, scorecards, spatial data representations and use of annotations is an important aspect of data analytics. In various roles you must be able to evaluate, propose and implement appropriate visualizations for a specified audience using key informational design concepts. In this assignment you will conduct an initial analysis of the data set.

**Program Learning Outcomes**

PLO7: Design and deliver presentations, reports, and recommendations that effectively translate technical results/data solutions and are coherent and persuasive to different audiences.

**Course Learning Outcomes**

This assignment is directly linked to the following key learning outcomes from the course syllabus:

* CLO1: Design dashboards that “tell a story” using a narrative flow
* CLO2: Use graphic design concepts that enhance accessibility and aesthetics
* CLLO3: Create effective data visualizations by understanding the context, choosing an appropriate visual, and eliminating clutter
* CO4: Create and present data visualizations that focus the attention of the stakeholder on key data insights

# CLO5: Using ethical strategies, identify and create visualizations that are not biased or misleading to the audience*.*

**Assignment Description (WHAT)**

# *Initial Analysis*

Once you understand the data, it’s much easier to design a dashboard knowing the key variables.

First, review the data set and start looking for valuable information to determine key drivers of the analysis. Analyze the variables/attributes/columns, information and seek correlations that complete a basic analysis. In your analysis, answer the following questions.

* What do you see as variables in the data?
* What correlations, patterns and trends do you see?
* Who will be the audience of the data? What question would they ask about the data?
* What questions would you propose to answer to your audience through the data viz?
* How could a dashboard be used to show data clearly?
* What types of graphs and charts can be used to clearly explain the data and answer the business question?

**Rubric Initial Analysis**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Criteria** | **Above Standards** | **Meets Standards** | **Approaching Standards** | **Below Standards** |
| **Data Analysis** | Goes beyond the requirements to provide an insightful and in-depth analysis of the data | Provides a thorough analysis of the data and identities key data points and appropriate business questions that will formulate the basis of the visualizations | Provides a well- structured analysis of the data. Provides data points that will formulate the basis of the visualization but some data points that are critical for the answering the business question(s) are not included or extraneous data points are focused on. | Provides limited analysis of the data. Does not identify specific data points or data points used are irrelevant to the business question(s) or needs of the audience. |
| **Visualizations** | Goes beyond the requirements to provide accurate, creative and appealing visualizations | Provides graphs, charts and other output that reflect the data analysis. Identifies other charts, graphs and visualizations that can be used in a dashboard. | Provides graphs, charts and other outputs that are related to the data analysis. Identifies other charts, graphs and visualizations for a dashboard, but these are limited or referenced in passing | Provides limited graphs, charts and other outputs or the outputs are not related to the data analysis. Does not identify charts, graph and visualization for use in a dashboard or only vaguely references the use of such visualization in a dashboard. |
| **Audience** | Goes beyond the requirements to connect understanding of the audience to the business questions with specificity | Demonstrates a keen understanding of the audience and its needs. Specifically addresses how the business question(s) will be addressed in the dashboard. | Demonstrates an awareness of the audience’s needs. Addresses how the business questions(s) will be addressed in the dashboard, but does so with generalities. | Demonstrates a lack of awareness of the audience and its needs. Vaguely addresses how the dashboard will address the business questions. |
| **Writing Mechanics** | There are no errors in grammar, spelling or punctuation. | There are no noticeable errors in grammar, spelling, or punctuation. | There are very few errors in grammar, spelling, and/or punctuation. | There are significant errors in grammar, spelling, and/or punctuation. |