**ALY6070: Tableau Application**

**Purpose of Assignment (WHY)**

Communicating complex data information and insights through story telling with data visualizations using dashboards, scorecards, spatial data representations and use of annotations is an important aspect of data science. 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 create an individual Tableau application.

**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
* CLO3: Create effective data visualizations by understanding the context, choosing an appropriate visual, and eliminating clutter
* CLO4: 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)**

# *Tableau Application*

Based on your initial analysis, please develop visualizations that effectively communicate your story using data. To do this, you should create visualizations that reflect the principles discussed in the course (e..g, storytelling, choosing effective visuals, gestalt principles, design principles, etc). You will then incorporate these visualizations into a Tableau dashboard. The dashboard should:

* Include as many different visualizations as needed. These should be of varying types (e.g., bar charts, heatmaps, etc)
* Answer the research/business question and display the key information that the intended audience needs
* Be easy to navigate and visually appealing
* Reflect the data accurately and generally communicate the data appropriately
* Tells a story
* You need to submit at least one dashboard with three graphs answering one research/business question and a one page paper with your rationale and findings

**Rubric Tableau Application**

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| **Criteria** | **Above Standards** | **Meets Standards** | **Approaching Standards** | **Below Standards** |
| **Data Preparation**  **15%** | The data set was cleaned, formatted, and prepared for analysis in an exemplary way. | The data set was cleaned, formatted, and prepared for analysis in a satisfactory way. | Flaws are present in the way the data set was cleaned, formatted, and prepared for analysis. | Substantial flaws are present in the way the data set was cleaned, formatted, and prepared for analysis, making the data set useless for analysis |
| **Concept Clarity**  **30%** | Initial concepts were original, relevant, and clear. The analysis was developed beyond expectations throughout the design process. | There is strength and relevancy in the initial concepts, most of which were visible throughout the iteration process | The project presents a recognizable concept, but the presented analysis could have been taken much further in terms of depth, argument and clarity. | The project lacks conceptual maturity - it does not have a clear point or contains flawed or contradictory arguments. |
| **Innovative Element**  **25%** | The chosen visualization type presents an innovative solution beyond being appropriate for the selected data structure. | Selection of visualization type is appropriate for the selected data structure. | There are other visualization types that are better suited for the selected data structure. | Selection of visualization type is not appropriate for the selected data structure. |
| **Visualization Design**  **30%** | The visualization is not only legible due to appropriate choices of colors, placement of visual forms, labeling and annotation, but demonstrates a high level of design competency. | The visualization is legible due to appropriate choices of colors, placement of visual forms, labeling and annotation. | Some good choices of colors, arrangement of visual forms, labeling and annotation, but inconsistencies and ambiguities remain. | Visualization is confusing due to inappropriate and inconsistent use of colors, placement of visual forms, or missing or confusing labeling and annotation. |