ASSIGNMENT GOALS

The assignment is intended to help you gain some hands-on experience, think creatively, and demonstrate your data visualization skills through Power BI/Tableau. Upon completion of this assignment, you will be able to grasp the main features of the data visualization software and understand an information system's entities and the unique relationships between them.

ASSIGNMENT GUIDELINES

The goal of this assignment is for your group to develop a final product to answer a specific question. You will be answering a specific question using analytics and critical thinking. Some examples of questions include "Where in the world has COVID-19 had the most significant impact?" "Where in the world can we operate to bring people out of poverty?" "Which team will be successful in the March madness tournament?" Once you have selected your question, you will then find data for this question and develop a visualization. Please see specific guidelines below.

1. *Develop your Question*
   - It is important to make sure that your question is *specific* and that you are able to use analytics to answer it. Think about an interesting question and then ask further questions to really understand that topic. You *may need to perform some research* in finding a suitable question to answer. Some points to consider to narrow down your research and make your question specific include:

     o   Do we want to focus in on a specific year?
     o   Is there a specific country we would like to focus on?
         Narrow down the regions that you are focusing on.
     o   What time frame do we want to look at?
     o   Is there a specific company we would like to focus on?
     o   Is there an age group associated with this question?

2. *Find your Data*
   - Once you have selected your question, you will collect the appropriate data to answer the question. Please make sure you are spending some time by looking through the resources provided below. It will be important to understand your data and the different data types that are within the file as well. Here is the link to the list of publicly available data sources curated by *Storytelling with Data*:
     https://docs.google.com/document/d/1Ads4XsCjXmDrdGRgfmm_OgRdpFcl6Qhs6SOllNGyq7Y/edit

   - Once you have selected the appropriate database, extract the information that is important for your analysis. Often times, datasets are quite large and contain information that is not relevant. Therefore, perform an analysis of your data and extract the information that is required to perform the analysis.

3. *Create Data Visualizations*
- For this assignment, your group will be required to use **Power BI**. If your team does not have access to Power BI, alternatively you can use **Tableau**. In order to create effective data visualizations, think about what the user should know or what they are looking for, and why they are looking for this.
- You want to make sure you are not cluttering your dashboard as most times more is not better. Simple visualizations are often times more effective.
- Please limit the amount of information you are listing on a single visualization and the dashboard.
- Please make sure you list your question somewhere on the dashboard.
- Once you have completed your dashboard, take a step back and view the dashboard in the eyes of the reader. Is there too much explanation? Not enough explanation? Does everything make sense and flow logically? Is there something missing that is not obvious to the reader?
- *Hint: Think about the topics covered in our class on Storytelling with Data*
- Your final submission will be a **single dashboard**.

4. *Submit a Memo to explain the solution and how you came up with it*
- This memo is designed to be concise and submitted as a **PDF** file.
- The memo needs to be no more than one page in length (please make sure you are using at least a 10 point size font)
- The following information must be included in the memo:
  - The question you are answering
  - A walkthrough explanation of the data analytics your team has performed and the methodology
    - Think about the data you used and why you used this data
    - Please provide the source where you obtained your data from
    - Discuss any data transformations that were made (any joins, links, calculations, etc.)
    - Any other information that would be useful for the reader to understand when viewing the visualizations

ASSIGNMENT SUBMISSION REQUIREMENTS

- Submit the **Assignment** in **PDF** format via **Canvas Assignments**
  - **Cover Page** with title, course/section #, group #, and group members' names
  - 2nd page: **Memo** including your question and explanation of your solution and how you came up with it
  - 3rd page: **Dashboard** image
- Submit the **Dashboard** created in Power BI/Tableau that incorporates the multiple visualizations to answer your question in **PDF** format (high resolution)
- Submit the **Power BI/Tableau** source file

DATA VIZ GRADING RUBRIC

Data Viz Rubric (13%)	
Criteria	**Points**
Memo: professional and provides insights and details on the question being asked	**20**
Question: the proposed question is specific and relevant to the data analytics	**20**
Dataset: the selected data is appropriate to answer the proposed question	**20**
Data Visualization: the dashboard provides a visual answer to the proposed question and is appealing	**50**
Data Analysis: data analysis provides insights and details on the question being asked	**20**
Deductions: missing files, spelling or grammatical errors, formatting issues, or otherwise not following assignment instructions (max 50%)	**-65**
TOTAL	**130**

NOTE: each of the **Criteria** will be marked using the following scale:

Below Expectations	Meets Expectations	Exceeds Expectations
50-65%	70-85%	90-100%

IMPORTANT NOTE

This project is worth **13%** of your course grade! See **Canvas Assignments** for the exact **deadline**!

LATE assignments will NOT be accepted and will result in zero grade for the whole team!

NOTE: If you do NOT participate in the group project, you will receive **zero (0)** mark on the assignment! Please keep in mind that your actual grade on this project may be adjusted, according to your group's evaluation of your contribution on the **Group iPeer Evaluation**.