### Project Report

Each group will submit one client-ready, written report in the form of a single, well-organized, annotated Jupyter Notebook **and** HTML export.

The report must include the following sections in sufficient detail:

* **Introduction (6 points)**
  + An introduction that sets the stage for your analysis, describes the questions you attempted to answer at a high level, explains why the answers to the question matter, and provides a detailed description of the data set(s) and how they were acquired.
  + Do not just copy the introduction from your proposal/project update. The final report introduction must be based on the report you are presenting.
    - Grading Rubric:Meets all criteria of: (1) High-level description of questions answered; (2) Explains why the questions matter; (3) Provides a detailed description of the data set(s); (4) Describes how the data set(s) were acquired; (5) Engages the user to want to read more
* **Choice for Heavier Grading on Data Processing or Data Analysis (1 point)**
  + A description of whether your project should be graded more heavily on data processing or data analysis. You must choose one option or the other.
  + If you select data processing, clearly describe why you believe the work you did goes above and beyond basic data processing needed for most data sets.
  + If you select data analysis, clearly describe why you believe the work you did goes above and beyond basic data analysis needed to answer your questions.
    - Grading Rubric:Choice is made and clearly described.
* **Data Processing (15 or 20 points) \*\***
  + A description and presentation of the tasks required to process (i.e., clean, transform, enhance, etc.) the data and prepare it for analysis.
    - Grading Rubric:Meets all criteria of: (1) Data set(s) selected are appropriately "dirty" depending on selection of heavier grading option selected; (2) Tasks for validating data cleanliness are performed to make the data ready for cleansing (3) Tasks for data cleansing are performed to make the data transformation ready; (4) Tasks for data transformation are performed to make the data ready for enhancement; (5) Tasks for data enhancement are performed to make the data ready for analysis
* **Data Analysis (15 or 20 points) \*\***
  + A description and presentation of your analysis, to include specific questions and any relevant output, tables, and figures aimed at addressing the answers to the questions.
    - Grading Rubric: Meets all criteria of: (1) Correct number of analyses are provided (not too few or too many); (2) Each analysis contains a clear description; (3) Each analysis is tied to the original question(s) being addressed; (4) Each analysis sufficiently answers the question(s) it is tied to; (5) Each question uses an appropriate analysis method to address the question.
* **Conclusions (5 points)**
  + Summarize your findings and explain why the results are meaningful.
    - Grading Rubric: Meets all criteria of: (1) Findings are summarized in an understandable format and not just a copy and paste of previous content; (2) Findings demonstrate reasonable conclusions given the analyses performed; (3) Conclusions include actionable items and/or recommendations for readers of the analysis; (4) Meaningfulness/Usefulness of findings is clearly articulated
* **Notebook Quality (10 points)**
  + Points are reserved for evaluating the quality of your notebook, including the organization, formatting, and appropriate use of markdown cells to document your process and analysis in a clear to understand format.
    - Make sure your Notebook starts at cell 1 and then continues contiguously. There must be no numeric gaps in your cells.
    - Grading Rubric:Meets all criteria of: (1) Notebook is well-organized; (2) Notebook is properly formatted (e.g. font sizes, bolding, italics, etc.) with a professional look; (3) Markdown cells are used to clearly document process and analysis; (4) Notebook progresses to tell a clear and compelling story
* **Generalizability (3 points)**
  + Points are reserved for evaluating the generalizability of your findings and intellectual contribution of your project.
    - Grading Rubric:Meets all criteria of: (1) Project content is generalizable to perform similar analysis with similar data; (2) Project clearly contributes to the area of study; (3) Project activities could be easily repeated by another business analyst.

**\*\* Extra Details on Data Processing vs. Data Analysis**

*Projects that are more Data Processing Focused:*

* (20 points for Data Processing / 15 points for Data Analysis)
* Must have **a minimum of three** analyses (each data visualization or model output counts as one analysis) and a **maximum of four**. **Do not include more than the maximum number of analyses.**

*Projects that are more Data Analysis Focused:*

* (15 points for Data Processing / 20 points for Data Analysis)
* Must have a **minimum of five analyses** (each data visualization or model output counts as one analysis) and a **maximum of six**. **Do not include more than the maximum number of analyses.**

Please keep in mind (always) high quantity != high quality. What story are you trying to tell with your analyses? And does each analysis serve a purpose?

You do not need to (and must not) output every step of the process, but a sufficient amount of text, output, tables, and figures needs to be produced to adequately describe the processing and analysis of the data. The quality of your code itself will be factored into the processing and analysis portions of your grade. All of the aforementioned aspects of the project must be addressed to an appropriate level of detail. Reports must be written as clearly and concisely as possible, with minimal grammatical and formatting errors. Any sources used in the report must be cited in the text and listed in a Reference section at the end of the report (any format is acceptable, but APA is preferred). Figures and tables must be used in the report whenever they are appropriate and must be referenced in the associated text.