Final Project Deliverable & Presentation Rubric

BA780 - Introduction to Data Analytics

Final deliverable

Due: Oct 15 @ 5 p.m.

The final project deliverable builds on the Team Assignment, taking it to the next level by diving deeper into the analysis. While it includes essential steps like data cleaning, pre-processing, and the initial EDA, the focus should be on the new questions. The goal is to streamline the deliverable, emphasizing the progression of analysis and the deeper exploration of the new questions while minimizing extraneous details.

How and what to submit?

Notebook - Submit one .ipynb via the Slack team channel — Do not submit a GitHub link.

GitHub - At the end of the course, all team members must submit a link to their own GitHub public repo with the final notebook. In the README.md file, all project contributors should be listed. Details will be provided.

A clean notebook should have

- ☐ **An appropriate filename:** A properly named notebook. E.g., B02-Project-Title.ipynb. ("-" = hyphen)
  - B02 represents team 2 from Cobort B.
  - E.g., B02-*Improving-the-Effectiveness-of-Fraudulent-Transaction-Alerts.ipynb*
  - Do not use spaces or special characters in the filename; instead, use a hyphen "-"
- ☐ There is a **title** on the top with the largest heading
- ☐ **Project proposal, including the data source**
- ☐ **Please summarize the Team Assignment phase** of your project in your final submission. The goal is to keep the overall notebook concise, so include only the key points and results from the team assignment rather than lengthy details. You may still use many code and text cells, but it doesn't need to be as thorough as the initial submission.
- ☐ **Introduction & motivation** - why should one read your analysis?
- ☐ **15** total charts for this phase (including the 5 from Team Assignment — you may replace any of the old submitted charts with new ones)
  - Charts should be sized appropriately, axes should be labeled, and legends should be legible.

- ☐ **Organization -** You should divide your notebook into **sections and subsections**
- ☐ **Questions** of interest under each subsection — the question doesn't have to be an actual sentence that ends with a question mark.
- ☐ Describe your **answer**
- ☐ Include a brief **executive summary** of your key observations at the top of the notebook.
    - It appears at the beginning of the report and provides a concise overview of the entire document. It includes key findings, objectives, methods, and major recommendations. The goal is to give decision-makers an understanding of the most critical information without reading the full report. It is forward-looking, often helping executives quickly grasp the main insights for strategic action.
- ☐ **A conclusion** at the end of the notebook.
    - It appears at the end of the report and summarizes the analysis's results. It focuses on interpreting the findings, reflecting on the analysis's outcomes, and reaffirming the recommendations or next steps based on the insights. It closes the discussion by recapping the most important data-driven points, typically informed by the body of the report.
- ☐ **Challenges** - Describe the data challenges you faced and how you handled them
- ☐ **References —** Provide all references from which you have used material. If not provided, any borrowed material will be considered plagiarism.
- ☐ **Generative AI Disclosure —** any use of generative AI tools, including for coding assistance/debugging or other purposes, should be disclosed in a statement after the references. How was the AI tool used, and which parts of the notebook? (see below)

Generative AI disclosure statement (example):

In completing this project, we have utilized Generative AI tools to assist with various aspects of our work. Below is a detailed account of how these tools were used:

- Content Generation: We used ChatGPT to brainstorm ideas and structure the initial outline of the project. The AI helped us refine our thesis statement and suggested key points to include in each section.
- Research Assistance: ChatGPT was used to summarize research articles and generate concise overviews of relevant topics, helping us better understand and integrate complex concepts.
- Code Review and Debugging: GitHub Copilot and ChatGPT suggested ways to improve our Python code, including optimizing algorithms and resolving potential errors.
- Proofreading and Grammar Checks: We used Grammarly to refine our writing, improve readability, and ensure grammatical accuracy.

Our team has reviewed, edited, and validated all AI-generated content to ensure its accuracy, relevance, and originality in accordance with academic integrity guidelines.

Grading Criteria

Category	Weight
Delivery and format of the notebook	1
Title/problem definition/data source	1
Executive summary	1
Storyline & cohesiveness	3
Data visualization	2
Python mastery	3
Notebook organization and use of Markdown	2
Quality of questions	2
Quality of answers	2
Conclusion	2
Generative AI statement	1
Total	**20**

To improve the quality of your report:

1. **Check for Typos:** JupyterLab doesn't automatically check for typos, but you can install extensions. Alternatively, review your text in a different editor before submission.

2. **Keep Notebooks Concise:**
   - Remove unnecessary or basic analysis.
   - Merge cells where possible to consolidate related information. For example, combine code that calculates multiple metrics for the same group.
   - Use .head(3) to display only a few rows of results, keeping the notebook concise.

In addition to the notebook grade above, you will also receive a grade for your presentation and Q&A from the class as well as the instructor. The individual's Q&A could have an impact on your class participation grade as well. Note that every student will get a slightly different grade based on the evaluations they receive. The formula is:

$$final = 0.7 * g/2\,(1 + r) + 0.3\,p + 0.05\,gm/5$$

Where

- *p: **p**resentation grade, given by the other judging team (30% of the grade)*
    - *scale: 0-20*
- *r: **r**ating of other teammates (*You lose 50% of the *rating* if you miss submitting the form)
    - *scale 0-1*
- *g: **g**rade of the project (what is announced on Slack)*
    - *scale 0-20*
- *m: project **m**anager rating (contributed an additional grade up to 5% of the project grade)*
    - *scale 0-5*

Final presentation

When: Last scheduled date of the class

Helpful information about the final presentation

- 10 minutes presentation + 2 minutes Q&A
- You may only use slides
- Your notebook will be sent to another team acting as the stakeholder during your presentation. The stakeholder team will study the notebook and prepare their questions. The questions will have a direct impact on the class participation grade. Likewise, answers will impact the project grade.
- Everyone in the class will rate your presentation. The following are the criteria that will be used to assess your presentation:
    1. **Mastery of the subject:** evaluates the team's understanding and ability to answer questions and justify their approach
    2. **Innovative solutions:** assesses the novelty and creativity of methods used
    3. **Knowledgebase:** measures the adequacy and relevance of background information
    4. **Presentation skills:** focuses on the clarity and organization of ideas and responsiveness to audience questions
    5. **Slides/presentation organization:** examines the coherence and structure of the presentation
    6. **Teamwork:** evaluates the involvement and collaboration of all team members during the presentation