

Data Management and Visualization

Fall 2024
Final Project

Who is Evaluating You?

Travis/Abid and an external examiner. The external examiners can be other academic staff from outside of CBS or practitioners. Due to the variety of backgrounds of the examiners, they may or may not be experts on the technical topics of the course. The final decision about the grade is up to the external examiner.

General Guidelines

Although you can use any software during your project, we will evaluate you on how well you used the three specific technologies discussed in class: databases, Python, and Tableau in accordance with the learning objectives. This way we can ensure consistency across scores. The final grade is based on an overall assessment of the written product and the individual oral performance.

The dashboard needs to be submitted in a format that it is accessible without having to install any software (external examiners don't necessarily have Tableau on their desktop). *Tableau Public* allows you to post a link to the dashboard. Include this link in the first page of the report. If we are unable to open or access the dashboard, you score zero for that part.

Remember that all submissions are checked for plagiarism. Avoid autoplagiarism by not reusing materials previously submitted as a mandatory assignment or used in other exams at CBS.

Writing the Report

We value *quality over quantity*. Your report should include a 1 page executive summary of your dashboard-based project addressing: What is the problem to be solved with your project? What makes your project special and interesting? Who is the client and what are their goals and motivation? What are your most important findings from your project and data analysis? Given these findings, what are your recommendations for the client?

Assume that you are writing the report to both managers (non-technically oriented people) as well as to subject matter experts (people with technical skills). The report should be understandable to anyone; special focus should be on the business implications for your imaginary client. The data description, methodology and sections explaining the design of the dashboard should however be written so that someone with a technical background could reproduce your results if needed.

Use high quality academic sources, white papers from reputable companies and reports from recognized organizations. Maximum 25 pages (excluding references), but fewer is better.

Do not cite:

- Wikipedia
- Medium, *Towardsdatascience*, Analyticsvidhya and similar pages

- My lecture slides (look for the source behind the slides)

Include a good description of the data. This can be e.g. a table or data dictionary that explains each variable and gives important information, such as what % of data was missing or faulty.

If you choose to transform data into an analytical database (or data warehouse schema), explain your choices clearly and present your transformed dimension and fact entity relationship configurations as ER diagrams using any standard annotations.

We are looking for groups with a good understanding of the data and who consider different ways in which it could have business value and promote the goals of the client.

The Oral Exam

The oral exam can last up to 20 min per student including the presentation of the project, questions, evaluation and feedback from the examiners. Each student needs to be able to answer questions related to any part of the project. However, in the presentation each student can focus on different things if they want to.

You are strongly advised to prepare a short Powerpoint presentation and to rehearse presenting it.

The Presentation

In the presentation, you do not just have to repeat or summarize the whole report. Rather you can focus on *highlighting* the most important parts, *explaining* where you made a mistake and how it could be fixed. This will show that you are aware of the project's limitations and have thought of how to solve them.

Example Flow of Presentation

1. Presentation of the project (max 3min)
2. Questions on the topics covered during the course
3. Questions on the presentation, project and dashboard
4. Students asked to go outside while the examiners determine the grades
5. The examiners provide feedback and the grade

What We Can Ask During the Presentation

Anything covered during the course, although we won't ask you to write code

- Anything about the dashboard
- Anything that is within the report
- Anything about the dataset
- Why you chose to do something (e.g. apply some method) and what could be an alternative to it

Explain what is happening in some diagram/picture that we show

Our Feedback

We might tell you if we disagree with some part of the project or your answer to a question. If this happens, do not panic. Do not get defensive! Recover from the situation by explaining the problem, how it might influence the results and by offering a solution (how this problem could be fixed).

Retaking the Exam

The instructions for the retake exam project will be provided after the deadline of the regular exam's submission.