

Final Project Rubric

Dec. 10, 11:59pm

The Final Project is your chance to take all the computational tools now at your disposal and put them to work. We want you to see the project as an opportunity to answer a question that excites you using the kind of analysis and computation that calls for Excel, Python, Google Maps, the Census, etc.

All projects should be submitted as a zip-file entitled `FinalProject_<logins>.zip`. This zip file should contain all of your python code, spreadsheets, etc. In addition, please include a file entitled `WEBSITE.txt` with the url of your site. All projects must include a `README.txt` in the zipfile. This text document should contain a description of each of the items in the folder as well as any concerns or important information not addressed elsewhere in your project presentation.

You are free to work in pairs but keep in mind that, should you choose this route, the expectations will be higher.

Rubric

Project Proposal (25%)

Your project proposal is due by Tuesday, November 23 (the Tuesday before Thanksgiving). Please email it to us as a .docx, .txt, or .pdf file. The proposal should be about a page and should do the following:

- Explain your overall goal in a few sentences. Think of this as your project's thesis statement.
- Tell us where you are pulling your data from and how you are going about this. For example, "I will download CSVs with Family Income statistics from the United States Census for the year 2000".
- Break down your project into steps and explain how they relate to the goal. For example, simply stating that you're going to find voting blocks isn't enough. Talk about the specifics, such as the actual data, formulas, and skills you will use. For example, if you were looking for

voting blocs, you should then describe what you're defining quantifiably as a "voting bloc". Then you might describe how you determine whether two senators are similar. For example, "I will look at each vote for the two senators of interest, and if they match, I will record a one and if they don't, a negative one. I will then add up these votes and divide by the number of votes that both senators were present for to get a number representing their similarity in voting patterns.

Execution (35%)

- This portion of your grade will reflect how well you were able to execute your plan of action.
- Make sure to look at your data at intermediate steps of your computation (intermediate spreadsheets, specific functions) and verify that it looks correct. This is where you will lose big points for bugs if you don't notice them.
- Besides bugs, your data will sometimes have errors in it; make sure you deal with this or at least mention it in your analysis.
- Use statistics if it is appropriate for your project.

Analysis of Results and Presentation (25%)

- You must present your results in some form, be it web page, Google map, Powerpoint slides, or pdf.
- This is where you should address any problem you had in converting your initial design into a result. If you do not address and reflect on issues in your code, you will likely lose points in both this section and in Execution.
- Explain what your numerical results mean. If you are using statistical methods, try to explain how you have used them to obtain meaningful results.
- Don't forget to mention any reflections on how you might have been able to improve your process if you were to do it again.

Code Quality, Comments, Documentation, and General “Production Values” (15%)

- Comment and document your work! We should feel that everything you submit is easy to understand, and we should not be baffled or confused by the data and work that we see. This is where you can use your `README.txt` and your presentation to your advantage – lead us through your project by telling us what files to view in what order.
- As always, please don’t submit messy or redundant code. Name your files and variables meaningfully (avoid using variables named with a single letter).
- “Production Values” refers to the cleanliness and professionalism of your over-all project. Basically, this means spell-check and remove the print statements in your python code you used for testing. Don’t have meaningless files lying around in your zip folder.

Extra Credit

There are some opportunities for getting extra credit on this project if we feel as though your work has gone above and beyond the requirements. Some things we may give extra points for include:

- Efficiency - Does your code run efficiently on large sets of data?
- Ambition - How ambitious is your project?
- Novelty - How interesting is your project?

Good Luck!