

Final Project Guidelines

Overview

The course project is your opportunity to work with your peers to explore a topic in depth. If you are looking for project partners, we suggest you post on Ed.

Projects for 209A teams will be graded at a higher level. These projects must implement a method that was not discussed in class and so will require some outside reading. Therefore, students enrolled in 109A should not form a team with students in 209A unless they are themselves comfortable with being graded at this higher level (any mixture groups will be graded at the 209A level).

Milestones

1. Monday, November 15: Group Creation and Project Selection (1 point)

Make a group for your team (3 - 4 students) by choosing from pre-made Canvas Groups labeled 'Project - Group #', and select your team's 1st, 2nd, 3rd, and 4th choice for a project topic in the 'Final Project - Milestone 1' assignment on Canvas. All team members should enter the group before submitting and only one member of your group should submit. If you do not have a group you still need to submit your preferred project topics individually in this Canvas assignment, and we will assign you to a team. But please note that your chances of getting your preferred topic are greatly increased by submitting as part of a group.

2. Monday, November 29: EDA, Baseline Model(s), and Project Statement (15 points)

On Canvas in the 'Final Project - Milestone 2' assignment, submit a 2 - 3 page project statement and EDA (can be created using Latex, word processing software, etc.) and an accompanying Jupyter notebook (that was used to create the visuals). Your 2 - 3 page submission should include:

- A description of the data: what type of data are you dealing with? What methods have you used to explore the data (initial explorations, data cleaning and reconciliation, etc)?
- Visualizations and captions that summarize the noteworthy findings of your EDA.
- A well-defined question that you'll address in the project based on the insights you gained through EDA.
- A baseline model.

3. Friday, December 10: Project Due (80 points)

Submit your final project on Canvas in the 'Final Project - Final Submission' assignment. You are required to submit the following:

- A well-organized Jupyter notebook with relevant code (30 points),

- A 6-10 page written report (can be created using Latex, word processing software, etc.) on the results, that can have the rough organization of a scientific paper (30 points).
- A link to a 6-minute video (20 points) of your group presenting your findings. Feel free to use slides, visuals, brief video clips from external source, etc. Have fun with it! One option would be to record your group presenting together over Zoom.
- Your final submission will be evaluated based on:
 - Logic and flow of presentation & technical content
 - Style of presentation (e.g., slides)
 - Execution of presentation
 - Motivation, context, and framing of the problem
 - Description of the data and how it was handled
 - EDA
 - Modeling approach; logical description of modeling decisions and process
 - Results; drawing reasonable conclusions and speculations; addressing strengths, limitations, and possible future work
 - Overall communication and clarity: good visuals, minimal typos, and readability
 - Coding efficiency and style
 - Depth and thoroughness (especially important for 209 groups)

4. Monday, December 13: Peer Evaluation (4 points)

A peer evaluation of each team member submitted separately (individually).