CS 175 (W25): Project in Artificial Intelligence
Project Report

Due date: Monday, March 17, 2025 (Pacific Time)

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This is the final submission for the course, a summary of what you have achieved in the past ten weeks. It should build upon the progress report, and extend it with your additional approaches, experiments, and results. You will be evaluated on how extensive your efforts were, how well you have evaluated your proposed approach, the success of your attempts at gaining insight, and the quality of your report. A significant component of this submission will also be to evaluate your own contributions. The final submissions add up to a total of 100 points (which makes up 40% of your final grade), 60 points of which are given to the group as a whole, and 40 points specific to individuals. The breakdown of the points is as below:

- Evaluation: 20 points
- Insight: 20 points
- Quality of report: 20 points
- Your contribution: 40 points
- Total: 100 points

The project report is due by midnight on Monday, March 17, with additional days as per your group's remaining grace days, if any. The contribution part is due the following Friday, March 21 (no grace days for this), so that you can take into account the final stretch of the project report and the presentations.

Part 1 Project Report (60 points)

The primary submission for the final report should be included on the website by adding a filename called `final.md` in your repo's `/docs` folder. This file should start exactly with the following lines:

```
---
layout: default
title: Final Report
---
```

The report should be self-standing, i.e. it should not need the previous submissions to understand what you are doing. It should consist of the following sections:

- **Video:** Use a level two header at the very top, and embed a video of your project. It may be easiest to upload to YouTube and use its embedding code inside your `final.md`. As in the progress report, the video should contain a brief problem description (using images, screenshots, or screen captures), an example capture of how a simple policy (e.g. random) performs, and an example capture of a run that is your best. You are free to include more details, such as summary of how you did it, some of the failure cases, but it is not required. The video should be a maximum of three minutes (less is fine), of reasonably high quality, i.e. a minimum resolution of 720p, and speech, if any, should be comprehensible.

- **Project Summary:** Use another level-two header to start a Project Summary section. Write a few paragraphs summarizing the goals of the project (yes, yet again, but updated/improved version from the progress report). In particular, make sure that the problem is clearly defined here, and feel free to use an image or so to set up the task. Part of the evaluation will be on how well you are able to motivate the challenges of the problem, i.e. why it is not trivial, and why you need AI/ML algorithms to solve it.

- **Approaches:** Use another level-two header called Approaches. In this section, describe both any baseline (naïve) approaches that you evaluated and your proposed approach(es). Describe precisely what the advantages and disadvantages of each are, for example, why one might be more performant, need less data, take more time, overfit, and so on. Include enough technical information to be able to (mostly) reproduce your project, in particular, use pseudocode and equations wherever they are informative.

- **Evaluation:** An important aspect of your project is evaluating your project. Be clear and precise about describing the evaluation setup, for both quantitative and qualitative results. Present the results to convince the reader of the effort that you've made to solve the problem, and to what extent you can claim that you succeeded. Use plots, charts, tables, screenshots, figures, etc. as needed. You'll likely need at least a few paragraphs to describe each type of evaluation that you performed.

- **References:** Make a list of work you're citing in your description above (starting with a level-two header). This should include any papers you think are relevant, third-party source code you used, sources for any of the images that you didn't create, and any other websites/links you found useful.

- **AI Tool Usage:** Please indicate clearly all aspects of the project in which you used AI tools, in what way, and in what form it appears in your results or reports.

Part 2 Contributions (40 points)

A Contributions assignment will appear separately on Canvas for you to describe your own contributions, your teammates' contributions, and evaluate yourself relative to your teammates. Keep in mind that if your project didn't work out, we're already taking that into account in other sections; this one is primarily to evaluate how much effort you put into the project.

- **Your Contribution:** In the first part, describe your own contributions to the project as a list of things you did, in no more that 250 words (the fewer the better). These can include things that maybe didn't make it into the source code, for example you tried some feature but it didn't work, or were responsible for the video, or you read a lot of papers and shared your understanding with your teammates. Also, give yourself a letter grade (F, C, B-, B, B+, A-, A, A+) summarizing how well you think you did, in terms of effective effort, relative to your teammates, using the text above as justification. Needless to say, this will not be your grade, so it's more important to be honest than to try to inflate this.

- **Instructor Meetings:** List all scheduled instructor (not TA) project meetings that you attended. If a meeting got rescheduled, please only list it once, at the time when you eventually attended it. If a meeting got canceled and not rescheduled, please list it as canceled. If your teammates met the instructor and you couldn't make it, please list it with the reason you couldn't make it (e.g. it was rescheduled for a time you were pre-committed).

- **Teammates' Contribution:** For each teammate, give them a letter grade (F, C, B-, B, B+, A-, A, A+) for how much you think they contributed. Again, be fair; give them a higher grade than you if they did more effective work than you, and avoid finding blame for why (if) the project didn't come together well. Also, justify your grade by providing a list of their contributions, using a maximum of 100 words for each teammate. This will not directly be your teammates grade, but is rather a tool to assess extreme unfairness in teammate efforts. For most teams, it wouldn't be a bad idea to make a list of your and your teammates contributions, and have a group meeting to go through those, and make sure everyone is on the same page.