CS 175: Project in AI (in Minecraft): Spring 2017
Project Final Submission

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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 status report to address all of its shortcomings in the approach, evaluation, or the demonstration. You will be evaluated on how challenging is the problem that you have solved, how well have you evaluated your proposed approach, and the quality of your demonstration. A significant component of this submission will also be to evaluate your own contributions, and that of your teammates.

The final submissions add up to a total of **100 points** (which makes up 40% of your final grade), 60 of which are given to the group as a whole, and 40 specific to individuals. The breakdown of the points is as below:

Quality of Report	10
Level of Challenge	20
Evaluation	15
Demonstration Video	15
Your contribution	40
Total	**100**

The project report is due by **midnight, June 12**, with additional days as per your group's remaining grace days, if available. The contribution part of the project is due only by **midnight, June 16** (no grace days for this), so that you can take the final stretch of the project into account.

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:

```
1  ---
2  layout: default
3  title:  Final Report
4  ---
```

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

- **Video:** Use a level two header to at the very top, and embed the video of your project. In order to embed the video, find your YouTube video ID, and insert the following in `final.md` after the header:

  ```
  [![IMAGE ALT TEXT HERE](https://img.youtube.com/vi/YOUTUBE_VIDEO_ID_HERE/0.jpg)]
  (https://www.youtube.com/watch?v=YOUTUBE_VIDEO_ID_HERE)
  ```

  As in the status report, the video should contain a brief problem description (using images, screenshots, or screen captures), an example capture of how a simple baseline 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 needed. The video should be a maximum of **three minutes** (less is fine), of reasonably high quality, i.e. a minimum resolution of 1200 × 720 (i.e. 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 status). 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 is it 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 the baselines and your proposed approach(es). Describe precisely what the advantages and disadvantages of each are, for example, why one might be more accurate, 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 as much as possible.

○ **Evaluation:** An important aspect of your project, as I've mentioned several times now, 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 that you have *solved* the problem, to whatever extent you claim you have. Use plots, charts, tables, screenshots, figures, etc. as needed. I expect you will need at least a few paragraphs to describe each type of evaluation that you perform.

○ **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.

A template for the final report is available here: `https://raw.githubusercontent.com/sameersingh/gh-skeleton/master/docs/final.md`. Please make sure your headers of each section are formatted similar to the template, but you're free to organize each section using lower-level headers, i.e. 3 (`###`) and 4 (`####`).

2   Contributions, 40 points

A *Contributions* assignment will appear separately on canvas for you to describe you 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 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** (lesser the better). These can include things that maybe didn't make 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 taught your teammates about it. Also, give yourself a letter grade (F, C, B-, B, B+, A-, A, A+) as to how well you think you did relative to your teammates, and the rest of the projects (as you've seen so far), using the text above as justification. Needless to say, this will not be your grade, so it's more important be honest than try to inflate this.

○ **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 work than you, and avoid finding blame for why (if) the project didn't come together. 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 I want to make sure unfair contributions are evaluated appropriately.

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.