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

Project Status

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http://sameersingh.org/courses/aiproj/sp17/

Like we discussed in our individual meetings, the status report consists of a prototype, *working* implementation of your proposed idea. By working, I mean that the environment may be limited in size and difficulty, but the system should be generally achieving the goal you proposed. The main idea is to consider your status report as a complete version of the final report, but one that is solving a simpler problem. If you are not clear about what the scaled down setup for your particular project should be, get in touch with me (if you cannot find a time, email me).

The status submissions add up to a total of **100 points** (which makes up 30% of your final grade), 80% of which are given to the group as a whole, and 20% specific to individuals. The breakdown of the points is as below:

Clean up Website	20
Technical Description Report	30
Video Summary	30
Peer Grading	20
Total	**100**

1   Cleaning up the Website (20 points)

Given that you are now progressing on your project, it is time to update the website to look better.

- **Project/Team Name:** Most of the teams picked very unimaginative titles for their teams and repos, like "CS175-project", "Minecraft-project", or even the placeholder "PROJECT". Now, pick a short name that is more interesting, funny, or random, and if it's descriptive of your project, perfect! Some examples of good names from the proposals include "Torchlight", "LARS" (for Lava Avoiding Reward Searcher), "Malrio", and "Sandhog".

- **Rename the Repository:** Using the above team name to rename the repository you are using for your code. The owner of the repository should go to Github, click on "Settings" (of the repo), change the "Repository name" to the one you chose, and click "Rename" and confirm the change. Your project website should now be hosted on the new URL (the old name will still work temporarily for pushing and pulling). Submit the new URL on Canvas.

- **Change the config file:** Also update the project title and the subtitle in the file `_config.yml` in the `/docs` folder. This will change all the pages to have the correct title as the header.

- **Improving the First Page:** Most of you did not change the first page, `index.md`, at all (understandably, since it was not *required*). Well, now it is. Change the main page of the project to be something more interesting, by including things like images/screenshots that are appropriate to your project, links to you source code repository, links to pages, videos, or other resources you found relevant, and/or a summary of your project.

2   Technical Description (30 points)

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

```
1  ---
2  layout: default
3  title:  Status
4  ---
```

Apart from the video, this page should contain the following[1]:

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[1] create level-2 headers for these by starting the lines with `##`

- **Project Summary:** Since things may have changed since proposal (even if they haven't), write a short paragraph summarizing the goals of the project (updated/improved version from the proposal).

- **Approach:** Give a detailed description of your approach, in a few paragraphs. You should summarize the main algorithm you are using, such as by writing out the update equation (even if it is off-the-shelf). You should also give details about the approach as it applies to your scenario. For example, if you are using reinforcement learning for a given scenario, describe the MDP in detail, i.e. how many states/actions you have, what does the reward function look like. A good guideline is to incorporate sufficient details so that most of your approach is reproducible by a reader. I encourage you to use figures, as appropriate, for this, as I provided in the writeup for the first assignment (available here: http://sameersingh.org/courses/aiproj/sp17/assignments.html#assignment1). I recommend at least 2-3 paragraphs.

- **Evaluation:** An important aspect of your project, as we mentioned in the beginning, 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 a *working* implementation. 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.

- **Remaining Goals and Challenges:** In a few paragraphs, describe your goals for the next 2-3 weeks, when the final report is due. At the very least, describe how you consider your prototype to be limited, and what you want to add to make it a complete contribution. Note that if you think your algorithm is quite good, but have not performed sufficient evaluation, doing them can also be a reasonable goal. Similarly, you may propose some baselines (such as a hand-coded policy) that you did not get a chance to implement, but want to compare against for the final submission. Finally, given your experience so far, describe some of the challenges you anticipate facing by the time your final report is due, how crippling you think it might be, and what you might do to solve them.

> You might need to include some math to describe what you are doing. To enable math mode, you will need to update your `/docs/_layouts/default.html` by either copying over the latest version from https://github.com/sameersingh/gh-skeleton/blob/master/docs/_layouts/default.html, or just copy the few lines from https://github.com/sameersingh/gh-skeleton/commit/283c. This change also gives an example of how to include math in your `.md` files, i.e. by putting LaTeX formatted equations between pairs of `$$`.

3   Video Summary (30 points)

One of the submissions for the status is to create a video summarizing your progress so far. The video is limited to **three minutes**. The video should contain a brief problem description (using images, screenshots, or screen captures), an example capture in Malmo of how a simple baseline performs (such as at the beginning of training), and an example capture of a run that is *working*. You are free to include more details, such as summary of how you did it, some of the failure cases, or what you plan to do in the remaining weeks, but it is not needed.

You should embed the the video on the status report page on the website. For example, if you upload the video on YouTube, add the embed video code provided by YouTube to the top of `status.md`. The video should be of reasonably high quality, i.e. a minimum resolution of 1200×720 (i.e. 720p), and speech, if any, should be comprehensible. I will create a thread on Piazza to discuss video logistics (please contribute as well as ask!).

4   Peer Grading (20 points)

In order to better familiarize yourselves with the other projects, and to train you to read and evaluate other people's work, we will be asking each of you to grade the progress report for **four** other projects. The peer review assignments will be assigned individually, and thus the 20 points for completion are individual-specific, not group specific. Your grading assignments for the projects will show up on Canvas, and has to be completed by **June 2nd, 2017**. Note that the peer grades will not be the final grade for the project, but they will definitely be taken into account.

4.1   Grading the Website

Given the project assigned to you, check out the website and the video summary. You should grade the website on the requirements above: Is the team name unique to the project? Is the first page not the default one, and is somewhat interesting? Does the team page look cleanly formatted? Overall, does it look like a website with polished content that can shared publicly? Give the appropriate score, and write a paragraph to justify it. You are not supposed to evaluate the technical content of the website when doing this.

4.2   Grading the Video

Now, find the video on the status page, watch it, and evaluate it for the requirements from the video. Primarily, was the video easy to understand and follow? Was the problem setup clear from the video? Was the general approach evident? What did you think of the implementation, does it seem like a reasonable prototype of the goals of the project? As before, provide a grade, and justify it in a paragraph, as the peer evaluator.

4.3   Grading the Report

Finally, read the status report, available on the `status.html` page, and evaluate it for the criteria described above. Was the summary adequate for you to understand the problem? Is the approach described in the appropriate level of detail? Were the experiments evaluating all the aspects of the project you think are important? Are there obvious baselines the group did not take into account? What did you think of the results? Do you think the plan for the next few weeks look reasonable? When providing the grade, justify it by using as many paragraphs as needed (I expect at least one each for the approach and for the evaluation).

> **Note:** See https://community.canvaslms.com/docs/DOC-10651 for some instructions on how to perform peer reviews in Canvas. A "peer review" rubric is available for you to use when grading the above three parts of each project.