Final Project Outline

[CS185] Default project released March 6th
[CS285] Project proposal due March 6th

1   Introduction

In this final project, you will delve deeper into the concepts we've covered in class and beyond. The goal of this project is to implement, evaluate, and analyze a research idea, documenting it in a workshop submission-style paper. The final project will be run slightly differently for CS185 (undergraduate) vs. CS285 (graduate) students, as described below. The deliverables for the project will consist of an initial project proposal (for 285 section students only), a brief milestone report, and a final project report. The 185 section students will be provided a project proposal as their starting point.

Note: Unless otherwise specified, all deadlines are at 11:59 pm through Gradescope.

Before asking a question on Ed, please take a look at the Q & A (see section 6)!

2   First steps

1. **Find a team.** Teams of 2-3 people are allowed. Refer to the Ed thread to help find team members. Note that we will expect larger teams to undertake projects with a larger scope, and we will generally grade based on an expectation of effort proportional to the number of team members.

   Note: For students in the 285 section (grad students), you are permitted to have outside collaborators, but they *must* be listed on your final submission and their (and your) contributions must be clearly described. Outside collaborators (i.e. students not in CS185/285) are not permitted for students in the 185 section.

2. **If you are in the 285 section,** you will be following the custom proposal route in which you will choose your own project idea and submit a short proposal for review. This proposal is due **March 6th, 2026 at 11:59 pm on Gradescope.**

3. **If you are in the 185 section,** you will be provided a default project direction. We highly recommend that all CS185 students go this route. Otherwise, you will need to receive express permission from the teaching team to pursue a custom project (see section 6). The project outline will be released **March 6th, 2026**.

3   Timeline & Milestones

The deliverable/milestone timeline for the final project is as follows:

	Section	
Component	**CS185**	**CS285**
Project proposal	Released March 6th	Due March 6th
Milestone	Due April 6th	Due April 6th
Final Report	Due May 13th	Due May 13th

4   Final Project Components

4.1   [CS285] Project Proposal

You will submit a project proposal to show a problem you have scoped out and would like to tackle for the final project. This proposal should be very brief and is meant to give the teaching team an idea of what you will be tackling, and if it is reasonable/feasible to do within the time frame of the class.

This project can be on anything you want, as long as it is related to the content of the class. In general, your proposal should answer these questions:

1. Which tasks or problems will you study? Where will you get your data or simulator (or real-world system)?

2. What is the main research hypothesis your project will investigate? All projects should at least attempt to evaluate novel ideas that pertain to deep RL or its applications.

3. How does the topic of your project relate to deep RL?

This proposal should be no more than **1 page**. It should also **clearly state who your group members are** (including external collaborators, if any). Proposals will be graded by the course staff, and feedback will be provided. Feel free to come to GSI/prof. office hours to discuss ideas.

Format: You can use LaTeX, Word, Docs, or any other writing software. It should be submitted as a PDF to Gradescope.

NOTE: Submit one proposal per group.

4.2   Milestone Report

The final project milestone will serve as a check-in on your progress at the midway point of the project. You will be asked to provide:

1. A **brief (1/2 - 1 page)** overview of the progress you've made so far. Specifically, describe at least one experiment you've performed (which need not be successful). If you've made changes to your hypothesis, describe what these are.

2. A **training curve** (from WandB or elsewhere) that demonstrates you have a method that trains, but it does not need to be your final method.

Format: You can use LaTeX, Word, Docs, or any other writing software. It should be submitted as a PDF to Gradescope.

NOTE: Submit one milestone report per group.

4.3   Final Report

The final report will compile your method, results, and discussion. The goal of the report is to describe your research process and provide the necessary components to convince a reviewer (the teaching team) that you have done something novel and valuable to the research community. However, don't worry if your project didn't pan out as expected, as research often does, but present both the positive and negative results of your work.

Your report should generally include these sections, but feel free to modify the structure if you deem it appropriate.

- **Extended Abstract.** Your report should start with a 1-page extended abstract, which provides a complete description of what you did and the main findings. Think of this extended abstract as a summary of your accomplishments (the "what"). The method section will provide the technical details (the "how"). **We will primarily use the extended abstract for grading, and refer to your methods and experiments if we need to better understand the correctness of the solution.**

- **Introduction.** Give more context about the problem and introduce the key contributions of your work.

- **Related Work.** Describe how your work is differentiated/positioned relative to other work in the field. This section can be brief.

- **Method.** Describe how your approach works.

- **Experiments/Results.** Give an overview of how you conduct your experiments and the results of your experiments. Discuss the results and how they prove (or don't prove) your hypothesis.

- **Discussion & Limitations.** Summarize the results of your work and describe its limitations.

- **Contributions.** Give a one-line (per team member) description of their contribution to the project. This is not typically a section in conference papers, though some papers do have it.

The full report should be about **8 pages** in length; we will not penalize shorter or longer reports, but please keep the length reasonable.

Format: You should preferably use LaTeX, and you are welcome to use the NeurIPS template. The final report should be submitted as a PDF to Gradescope.

5 Grading & Rubric

The final project is worth **20%** of your final grade. We break down the grading as follows:

	Weight(%)	
Component	**CS185**	**CS285**
Project Proposal	0%	2.5%
Milestone	5%	2.5%
Final report	15%	15%

The proposal and milestone components will be graded for inclusion of the specified components.

We use the following rubric to grade the final report. **A more detailed rubric for 185 section students will be released with the final project outline.**

	Poor (0-50%)	**Fair (50-75%)**	**Good (75-90%)**	**Excellent (90-100%)**
Novelty	Replicates existing work without new contributions or perspectives.	Applies existing work to a new environment without novel perspective.	Replicates existing work with some modifications.	Substantively original implementation or perspectives.
Scope	No implementation effort, e.g., running existing code on existing problem without in-depth analysis.	Relatively little implementation or analysis effort per group member.	Nearly ambitious enough for a workshop paper, with some missed opportunities.	Similar scope to a conference workshop paper.
Analysis	No comparison with baselines or ablations. Experiments do not evaluate the proposed problem.	Experiments are trivial/superficial/do not test the proposed setting. Inappropriate baselines or ablations.	Solid comparison with multiple baselines and some ablations. Experiments effectively test the problem setting.	Compares with several baselines and ablations. Experiments are well thought-out and explain why the methods work or don't work.
Complete-ness	No results due to incomplete implementation or training failure. Key elements are missing or not functional.	Implementation with significant issues. Experiments fail to effectively compare methods (e.g. all methods are identical).	Substantially complete. Experimental results differentiate between methods but may lack some discussion.	All experiments are complete and results are discussed fully.

6 Q & A

If you have any questions, please do not hesitate to post your question on Ed using the tag "Final Project". Feel free to also come and discuss project ideas with us at office hours.

I am a grad student (285 section) doing research in a Berkeley lab. Can I use my project for the final project? Yes. If you are working on research sufficiently related to the course material, and you are a lead author on the project. If you are uncertain if it is sufficiently related, come to office hours to discuss with a GSI, or you will be given feedback on your proposal that the scope is not close enough to the course material (so please preempt this by coming to office hours!)

I am an undergraduate student (185 section) doing research in a Berkeley lab. Can I use my project for the final project? Yes. If you are working on research sufficiently related to the course material and are contributing significantly (lead author). However, you **_must_ contact the teaching team at our course email (cs285-staff-sp2026@lists.eecs.berkeley.edu) ASAP** to get permission to do this, and _must_ list your collaborators on your report. Otherwise, we will assume you will be doing the default project.

I am an undergraduate student (185 section), and I want to work with a grad student in the class. Can I do this? Yes. You must similarly get permission from the teaching team to do this, as with the previous question, and _must_ list your collaborators on your report.

I am a grad student (285 section), and I want to follow the default project instead. Can I do this? Yes. You will be graded according to the same rubric as the 185 section students.

Can I work alone on the project? Maybe. If you are working on a research project in a lab, you may be the only person in the class working on the project. In this case, you can work alone but you _must_ list your outside collaborators on your report and please notify the teaching team. Otherwise, we expect teams of 2-3 people.