

Project Instructions

DATA 37200: Learning, Decisions, and Limits (Winter'25)

General Instructions

The project will count for 45% of your total grade.

The project could be one of the following three categories: (A) Survey-style, i.e. reproduce the proofs of existing papers and attempt to synthesize and clarify the existing literature; (B) Novel research and results; (C) something between A and B (this is often a good option, since the first step of doing novel research usually requires understanding what people did before).

Please notice that though the course is theory-oriented, your course project does not need to be — i.e., applied project is equally welcome! If you choose to write a survey, it should generally be theory oriented — that being said, understanding relevant applied questions, formulating new research questions and directions for theory, and working on bridging theory and practice would all be great. Perhaps it goes without saying, but your project must be relevant to the topics covered in the class (such as RL, online decision making, etc) and you should make efforts to connect with course material.

You are encouraged but not required to form a team of up to 3 members. The standards explained in this document apply to all projects, but the expectation/bar for a project with more members are somewhat higher in terms of total effort.

Please feel free to discuss with the professors or the TA regarding, e.g., identifying a topic, references, ideas for the project, but it is not required.

Notice: as far as research, we understand that research is risk and unpredictable. So your project does not have to show perfect results — in fact, you can have a successful project by showing all the things you have tried and *why they failed*. The primary goal is for you to exercise the concepts and techniques you learned in an interesting research domain. As long as we see that you have tried out non-trivial methods (which is usually easy to see), there should not be much to worry.

Timeline and Presentation Formats

Project Proposal (5 points) — this is primarily to make sure that you do have a team and have a problem to work on. Submission is an *one-page* file that describes what are your team members, what you would like to work on, and some initial thoughts/survey. It is due by **February 2nd, end of day in CT**. You will submit it to **Gradescope** — notably, every team member needs to submit it, even though you will be submitting the same document (since this makes it easier for giving grades on Gradescope).

Project Presentation (10 points) — each project will be given a short amount of time (exact amount depending on number of projects) to be presented during the last class of this course (i.e., **3/6 Thursday**).

Project Report (30 points) — majority of the score is assigned to the final report in PDF format, which should be at most 7 pages with single-column, 11 pt fonts and 1 inch margin. (You may add additional appendices/supplemental information, just like with a typical conference submission, as long as the main document makes sense by itself.) This is due by [March 7th \(03/07\) end of day ct to Gradescope](#) as well — notably, every team member needs to submit it, even though you will be submitting the same report.