

Project Instructions

(following <http://www.cs.cmu.edu/~epxing/Class/10708-19/project>)

Your class project is an opportunity for you to explore an interesting problem in the context of a real-world data set. Projects should be done in teams of 2 to 3 students. Each project will be assigned a TA as a project consultant/mentor; instructors and TAs will consult with you on your ideas, but of course the final responsibility to define and execute an interesting piece of work is yours. Your project will be worth 25% of your final class grade, and will have 4 deliverables:

1. **Proposal** : 2 pages excluding references (2%)
2. **Midway Report** : 5 pages excluding references (4%)
3. **Presentation** : spotlight slides presentation (4%)
4. **Final Report** : 9 pages excluding references (15%)

All write-ups should use the NeurIPS LaTeX style:

<https://neurips.cc/Conferences/2021/PaperInformation/StyleFiles>

Team Formation

You are responsible for forming project teams of 2 to 3 people. Once you have formed your group, please send one email per team to the class instructor list with the names of all team members. If you have trouble forming a group, please send us an email with your interests, and we will help you find project partners. We will also open up a Piazza forum for project partners to match up.

Project Proposal

You must turn in a brief project proposal that provides an overview of your idea and also contains a brief survey of related work on the topic. We will provide a list of suggested project ideas for you to choose from, though you may discuss other project ideas with us, whether applied or theoretical. Note that even though you can use datasets you have used before, **you cannot use work that you started prior to this class as your project.**

Proposals should be approximately **two pages long**, and should include the following information:

- Project title and list of group members.
- Overview of project idea. This should be approximately half a page long.
- A short literature survey of 4 or more relevant papers. The literature review should take up approximately one page.

- Description of potential data sets to use for the experiments.
- Plan of activities, including what you plan to complete by the midway report and how you plan to divide up the work.

The grading breakdown for the proposal is as follows:

- 40% for clear and concise description of proposed method
- 40% for literature survey that covers at least 4 relevant papers
- 10% for plan of activities
- 10% for quality of writing

The project proposal will be due at **11:59 PM on Tuesday, October 19**, and should be submitted via [Gradescope](#).

Midway Report

The midway report will serve as a check-point at the halfway mark of your project. It should be about **5 pages long**, and should be formatted like a conference paper, with the following sections: introduction, background & related work, methods, experiments, conclusion. The introduction and related work sections should be in their near final form; the section on the proposed methods should be almost finished; the sections on the experiments and conclusions will have the results you have obtained, perhaps with place-holders for the results you plan/hope to obtain.

The grading breakdown for the midway report is as follows:

- 20% for introduction and literature survey
- 40% for proposed method
- 20% for the design of upcoming experiments and revised plan of activities (in an appendix, please show the old and new activity plans)
- 10% for data collection and preliminary results
- 10% for quality of writing

The project midway report will be due at **11:59 PM on Tuesday, November 16**, and must be submitted via [Gradescope](#).

Final Report

Your final report is expected to be **9 pages excluding references**, in accordance with the length requirements for a NeurIPS paper. It should have roughly the following format:

- Introduction: problem definition and motivation
- Background & Related Work: background info and literature survey

- Methods – Overview of your proposed method – Intuition on why should it be better than the state of the art – Details of models and algorithms that you developed
- Experiments – Description of your testbed and a list of questions your experiments are designed to answer – Details of the experiments and results
- Conclusion: discussion and future work

The grading breakdown for the final report is as follows:

- 10% for introduction and literature survey
- 30% for proposed method (soundness and originality)
- 30% for correctness, completeness, and difficulty of experiments and figures
- 10% for empirical and theoretical analysis of results and methods
- 20% for quality of writing (clarity, organization, flow, etc.)

The project final report will be due at **11:59 PM on Tuesday, December 7** and must be submitted via [Gradescope](#).

Spotlight Presentation

All project teams will present their work at the end of the semester. For the last one or two classes, each team should present a brief (less than five minutes, exact time TBD) spotlight presentation, similar to conference spotlights.