

## Problem Set 7: Project Proposal

*Due: Wednesday, October 25, 2017 at noon*

**Problem 7.1 [Project Proposal].** This week, instead of a technical problem set, we ask that you write up a proposal for your final project. A project proposal is a short (1–2 page) document describing the topic and type of your project, as well as justification for why this will be an appropriate class project for your group and group size. More than anything else, the point of the project proposal is to get you thinking clearly about what your project will be and allow us to offer suggestions and feedback before any major work is done. Your project proposal doesn't commit you to the exact plan and topic described, but if you decide to change direction substantially, it is required that you check in with the course staff to get feedback on the new direction.

A project proposal should demonstrate that the project idea is related to the class, substantial enough to be a class project, and feasible to finish in the semester. A good proposal will likely contain the following.

- 1) The (anticipated) type of project: implementation, problem posing, research, survey, or Wikipedia, as detailed on the course webpage.<sup>1</sup>
- 2) A description of the problem and why it is of interest.
- 3) A summary of background research, including a literature search if relevant.
- 4) A very rough plan of how to tackle the problem, including resources that might be necessary and problems that might arise.
- 5) A description of feasible milestones, or minimal viable products, that might be accomplished along the way, particularly if the objective turns out harder than expected. For example, if you're working on an open problem, which might end up being too difficult, what special cases might you solve?
- 6) A description of how the project can be extended if the objective turns out easier than expected.
- 7) Any questions, concerns, or anticipated needs from the course staff. You are of course welcome to contact us before the proposal is due to address these.

The projects page<sup>1</sup> on the course website has more information about the requirements for the final project. You can find ideas on Coauthor, in past or future lectures, in recent papers, and by talking with staff and students. In particular, the final project is a good opportunity to finish work started during class. We recommend coordinating with other students to form groups and generate ideas. The Project Idea Discussion thread<sup>2</sup> on Coauthor is one place to do so. In particular, you should post to that thread if you want to take on a problem posed in class, to avoid conflicts.

You should work on the proposal with your planned project group. This group is allowed to change later, but please inform the course staff if your group re-organizes (splits/merges/etc.). Please submit one project proposal per group, via Gradescope, including the names of everyone involved. (This group can include course staff and people not in the class.)

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<sup>1</sup><https://courses.csail.mit.edu/6.851/fall17/project/>

<sup>2</sup><https://coauthor.csail.mit.edu/6.851-2017/m/umWg4Lgy8qsK5QzAy>