

## 6.849: GEOMETRIC FOLDING ALGORITHMS, FALL 2020

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### Problem Set 6: Project Proposal

*Due: Thursday, October 22, 2020*

**Problem 6.1 [Project Proposal].** This week, we ask that you write up a proposal for your 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. 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 fully commit you to the exact plan and topic described, but if you decide to change direction substantially, you must check in with the course staff to get feedback/approval 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:

- (a) The (anticipated) type of project: art/design, visualization/implementation, theoretical research, survey, lecture, tutorial, or Wikipedia, as detailed on the course webpage.<sup>1</sup>
- (b) A description of the problem and why it is of interest.
- (c) A summary of background research, including a literature search if relevant.
- (d) A very rough plan of how to tackle the problem, including resources that might be necessary and problems that might arise.
- (e) 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, and it ends up being too difficult, what special cases might you solve?
- (f) How the project can be extended if the objective turns out easier than expected.
- (g) 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. We also recommend coordinating with other students to form groups and generate ideas, for example, using the Project Discussion Comingle room and associated Coauthor thread.<sup>2</sup>

We strongly recommend using final projects to carefully write up work you (and others) have done during class. To this end, you are allowed to work on multiple projects, so long as your total contribution is sufficient (“one person project unit”). Indeed, for theory/research projects, we encourage projects to match papers as closely as possible. If you work on multiple projects, we suggest having one as your *main*, or one or a small number to which you will make *major* contributions, along with any number of projects to which you will make *minor* contributions.

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 project/group by attaching a PDF in the Coauthor project proposal thread.<sup>3</sup> Your proposal should include the names of everyone involved (which may include course staff and people not in the class). Edit your Coauthor attachment to mention everyone in your group along with their level of involvement in the project.

<sup>1</sup><http://courses.csail.mit.edu/6.849/fall20/project/>

<sup>2</sup><https://coauthor.csail.mit.edu/6.849-2020/m/dnKgGCah5qvcBjAi6>

<sup>3</sup><https://coauthor.csail.mit.edu/6.849-2020/m/QKCse7AQ6YtqZjWvb>