
Project plan and crowdsourcing

You should do either 1 or 2 depending on whether you are taking 145 in the spring term or not. In both cases, you may work in groups of 3-5.

1 Project plan (for those taking 145 next term)

Your task is to put together a detailed plan for the project you will complete during the third term in 145. Your group for the project plan does not need to be the same group that you did your project proposals with. Your project plan should be 5-10 pages long and it should include:

- (a) A section describing the motivation and big picture goal of the project. Feel free to use any of the ideas you or your classmates proposed in the project proposal assignments, or to come up with a whole new project idea. The scope of allowed projects is extremely openended, so just find something you are excited about. (~1-2 pages)
- (b) A section discussing prior related work and how your ideas build on and extend the status quo. We expect that this will be the bulk of the work in terms of putting together the project plan. (~2-3 pages)
- (c) A detailed proposed timeline for the third term including at least three measureable checkpoints. (~1 page)
- (d) A detailed discussion of the final output (theorem, application, etc.) that your project will yield if successful, and detailed discussion of your predicted worst-case scenario if things do not go according to plan. (~1 page)

2 Crowdsourcing for course design (for those *not* taking 145 next term)

Crowdsourcing is a hot buzzword around the web these days that consists of making an open call to a large group of people (crowd) for contributions to an ongoing project. Here you are my crowd, and the ongoing project is this class – I want you to help me make the course better next year. Specifically, you have two tasks:

- (a) Tell me which course topic (spanning 1-2 lectures) you think should be dropped from next year’s class.
- (b) Suggest a new topic to replace it. But, here you have to do some work. For your topic you have to give me (i) notes or powerpoint slides for 1-2 90min lectures about the topic and (ii) 2 possible homework questions related to the topic (can be either “theory” or “hands-on”, but ideally would be one of each), including the solution for at least one of the problems.

Some possible topics to consider, in no particular order, are: *Peer-to-peer systems, Prediction markets, Voting, Recommendation systems (e.g., Netflix & Amazon), Privacy & identity, Crowdsourcing, Diffusion/Cascades in networks (e.g. of viruses), Botnets, Spectral properties of networks, Rank aggregation (how to combine rankings to achieve “meta-rankings”), Temporal properties of networks, Community/cluster detection in networks, Homophily in social networks.*