Project Proposal, CS 6241 Spring 2020

Instructor: Austin R. Benson
Due Thursday April 23, 2020 at 11:59pm ET

Assignment

The goal of this assignment is to brainstorm and catalog ideas for, as well as plan, your final project. Another goal is to get some preliminary feedback on your project.[1]

The assignment is a *project proposal* where you write a short, 1–2 page proposal on what you would like to work on for the final project. This is the first component of the final project. The other components will be a progress report, a virtual feedback meeting, and a final report.

You can work in groups of size 1, 2, or 3 for this assignment. This group must be the same for the other project components, but the group can be different from the one for your reaction paper.

[1] Brief feedback will appear on CMS. After the progress report assignment is due, there will be a virtual feedback meeting.

Choosing a project

The course project is purposefully open-ended so that you can use the class to further develop your existing research or learn a new topic in which you are interested. The project can be more theoretical, such as developing and analyzing a new numerical method, or more empirical, such as evaluating a few methods on some interesting datasets.

Please keep in mind that the final project will be required to contain the following pieces:

1. A numerical method (broadly construed) with some mathematical discussion. You do not have to prove new theory, but you need to be able to discuss the mathematical ideas behind the method.
2. Analysis of a real-world (i.e., non-synthetic) dataset. However, I encourage you to also demonstrate the method on synthetic data if appropriate. This part will require that you write some code to perform the analysis. You don't have to re-implement anything from scratch if existing library software is available.

Proposal writing

Spend 1–2 pages explaining what you want to do for the project (what questions do you want to answer?) and how your group will proceed. Make sure to explain how the above two points (numerical method and data analysis) will be part of your project. *Identify at least one real-world dataset that you can use for your project*. Include references to other papers where appropriate.

Preparation & submission guidelines

Typesetting. Your project proposal should be prepared with LaTeX.

Collaboration. *You can work on and submit your proposal in a team of size 1, 2, or 3. Your team must remain the same for all components of the final project (proposal, progress report, virtual feedback, and final report).* Please submit one project proposal per team but include all of the team member names and NetIDs on the submission.

Academic Integrity. I expect you to maintain academic integrity in the course. Failure to maintain academic integrity will be penalized severely. Plagiarism is a form of academic misconduct, so make sure to provide proper citations. Cornell has a number of guidelines on plagiarism.[2]

[2] https://plagiarism.arts.cornell.edu/tutorial/index.cfm

Submission. Your 1–2 page project proposal should be submitted as a PDF and include the names and NetIDs of the members of your team (only one team member should submit). Submit your PDF on CMS.[3]

[3] https://cmsx.cs.cornell.edu