

Final Project Guideline

CS590-CSC (Crowdsourcing and Social Computing), Fall 2018, Purdue University

Project Goal

The goal of the final project is to develop a deep understanding of a specific research area related to the topics of the class, and to the extent possible to work on an open research problem. Students can work on the final project either individually or in a group of two, and the number of participants in a project will be considered in the evaluation of the project.

Project Topics

Students are required to submit a proposal specifying the topic that they plan to work on during the final project. Students are free to pick any topic of interest in the general field related to crowdsourcing and social computing. Students are also encouraged to connect the final project with their own research. Final projects can be computational, experimental or empirical. Here are a few examples of final projects that students can consider working on:

- **(System)** Identify an innovative use case where the crowd can help. Design and develop crowdsourcing workflows, platforms, systems or mobile applications to enable the utilization of the wisdom of crowd in these cases, and conduct a user study to understand how the workflows/platforms/systems/applications are used by the crowd. See the papers in the following classes for examples:
 - Workflow design: Use-specific workflows
 - Workflow design: General workflows
 - Beyond independence: Cooperative work examples
 - Cooperative work: Complex work
 - Crowd-Powered Systems
- **(Experimental)** Identify a factor in the design of crowd work that may have an impact on the crowdsourcing outcome. Design and conduct an online experiment to understand the effect of this design factor and provide suggestions for future requesters to appropriately design this factor in their tasks. See the papers in the following classes for examples:
 - Incentive design: Financial incentives
 - Incentive design: Other incentives
 - Quality assurance: Empirical methods
 - Engagement control: Empirical methods
- **(Computational)** Propose computational methods to improve the efficiency of crowdsourcing processes. Compare the proposed method with the state of art methods and show whether and when the proposed method is preferred. See the papers in the following classes for examples:
 - Incentive design: Intelligent management
 - Task assignment and recommendation
 - Quality assurance: Algorithmic approaches
 - Quality assurance: Intelligent management

- Engagement control: Intelligent management
- Workflow design: Intelligent management
- Cooperative work: Intelligent management
- **(Empirical)** Collect data sets for current crowdsourcing and social computing platforms/systems. Conduct data analysis to understand the dynamics and user behavior on the current platforms, or compare dynamics and behavior across different platforms. See the papers in the following class for examples:
 - Crowd workers
 - Crowdsourcing platform: Tasks and dynamics
- **(Future Idea)** Propose disruptive ideas that may potentially transform how crowdsourcing and social computing platforms/systems function in the future. Elaborate on how these ideas can be implemented and the potential benefits of these disruptive changes. See the papers in the following classes for examples:
 - Crowdsourcing: Opportunities and challenges
 - Crowdsourcing: Future Ideas
- **(Crowd + X)** Study how the wisdom of crowd can be leveraged in domain X, which can be your research idea or simply an area that you have interests in.

Project Timeline

- October 3, 2018: Final project proposal due at 11:59pm. (Send it to the course email)
- October 10, 2018: Project Q&A Day (in class)
- October 15, 2018: Final project pitch day (in class)
- November 7, 2018: Final project peer feedback session (in class)
- November 28 & December 3, 2018: Final project presentation (in class)
- December 8, 2018: Final project report due at 11:59pm. (Send it to the course email)

Tip: Notice that there are only three weeks between the final project pitch day and the final project peer feedback session. So please don't wait until the final project pitch day to start working on your project! Start early and you'll be more prepared for peer feedback session.

Project Documents

Students are asked to submit two documents for their final project: the project proposal, and the final report. For both documents, please format your submission based on ACM SIG Proceedings Templates: <https://www.acm.org/publications/proceedings-template-16dec2016>.

Project Proposal (due 11:59pm, October 3, 2018)

A 2-page maximum document describing:

- The topic you plan to work on for the final project; in particular, please explain why you believe the topic you've chosen is an interesting and innovative topic, and how is it different from related research that we have learned about in class.
- Your plan of activities to conduct in your project (e.g., literature survey, data collection, experiment design and implementation, model formulation, data analysis, etc.)
- Your plan to evaluate the outcome of your project (e.g., what do you expect to achieve through your project? How will you measure whether your project achieve the intended goals?)
- Your project timeline (e.g., how much time will you spend on each of the activities you plan to conduct for your project?)

Final Report (due 11:59pm, December 8, 2018)

Notice this is a HARD deadline. No extension will be provided for the submission of final report.

The final report is a 10-page maximum document summarizing:

- The topic of your final project (e.g., what is the problem you project solves? What are the research questions you ask?)
- The method you use in your project (e.g., how do you design your experiments? How do you mathematically formulate your problem? What kind of data analysis you conduct?)
- Evaluation of the outcome of your project. Use the evaluation plan you have in your proposal to guide this process, and explain the results or findings of your project.
- Discussion on the implications of your project: Based on your findings in the project, what is your suggestions for future users (e.g., task designers, crowd workers, etc.) of the crowdsourcing and social computing platforms/systems?

Consider to use the final report as an opportunity to practice your *scientific writing skills*. Thus, throughout the process of writing the final project, please think about:

- How can I convince the readers that the topic of my project is an important and interesting one?
- How can I communicate the methods I use in the project to the readers in an organized and accessible way?
- How to convince the readers the findings of my project?
- How to ensure that readers of my report understand the key take-away messages of my project?

Project Presentations

Students will give three short presentations about their project: final project pitch, milestone presentation, and final presentation.

Final project pitch (October 15, 2018)

Each project team gets 5 minutes to present to the class: (1) the topic proposed to work on for the final project, (2) why they are excited about this project, and (3) what's the expected outcome of this project. Each team then gets 2 minutes to answer questions from the audience.

At the end of the final project pitch class, each student will vote two of their favorite projects. The team with the highest votes will get a small prize.

Final project milestone presentation (November 7, 2018)

Each project gets 6 minutes to present to the class: (1) the current status of their project: what have been done? (2) the challenges that they face in the project, and their initial ideas for tackling these challenges, and (3) the activities they plan to conduct in the next stage of the project? The audience then have 5 minutes to ask questions, provide suggestions and feedback.

Final project presentation (November 28 & December 3, 2018)

Each team gets 10 minutes to present to the class: (1) what they have been working on in the final project? (2) what methods they take and what their results/findings are? (3) based on their findings, what suggestions they can provide to future users of crowdsourcing and social computing systems? and (4) what are the possible future work for the project? Each team then gets 3-5 minutes to answer questions from the audience.

Project Grading

Final project contributes to 45% of the final grade in this class. A detailed breakdown is as follows:

- Project proposal + pitch: 10%
- Project milestone presentation: 10%
- Project final presentation: 10%
- Project final report: 15%

Project Office Hours

From September 19, 2018 to October 3, 2018 (the period when you are working on your final project proposal), the instructor provides two office hour periods at her office:

- September 20, 2018 (Thursday), 4-5pm
- September 27, 2018 (Thursday), 4-5pm

October 10, 2018 will be the Project Q&A Day. You can spend this class working on your project, and the instructor will answer questions that you have regarding your project in the classroom.

Other than these scheduled office hours, you may also make additional appointments with the instructor through email.