

Social Computing Systems

EECS 498, Fall 2018

Summary: Computation rarely exists in isolation. From social media, to collaboration and coordination tools, to crowdsourcing and collective intelligence, technology has risen from use as an individual tool for use in focused domains to play a role in or even mediate a majority of social interactions today. *Social Computing* is the study of this interplay between social processes, and the computation that supports and augments it. This course covers social media, data mining and analysis, interaction design, crowdsourcing, human computation, and peer production. Through a semester-long group project that will result in the creation of a working social computing system, this course also fulfills the College of Engineering's Major Design Experience (MDE) requirement.

Instructor: Walter S. Lasecki (<http://web.eecs.umich.edu/~wlasecki/>)

Lecture: 3:00pm-6:00pm (ends at 5:50pm) T/Th, 1012 FXB

Credits: 4

Prerequisites: EECS 493 (UI Development) or EECS 485 (Web Databases) are suggested

Office hours: Friday, 9-10am (time will always be available in class, as well)

Course website: <http://tiny.cc/socsClass>

[Optional] Further reading: *Building Successful Online Communities* by Kraut and Resnick

Live feedback channel: Slack team

In-Class Schedule (by week) **subject to slight changes*

9/6	<i>Course Introduction / Social computing platforms</i>
9/13	<i>Evaluation methods and prototyping SoCSs</i> - Overview, goals of evaluation, and methods
9/20	<i>Computer supported cooperative work</i> - In-office tools / methods (incl. management + workflow tools) - Connectivity tools: Skype / Google Hangouts / GotoMeeting - "Working together from afar" (telepresence and social robotics) - Collaboration platforms (incl. peer production and innovation)
9/27	[[Project Idea Pitches]]
10/4	<i>Tools: Meteor JS / Collab Systems Architecture</i>

10/11	<i>Social Networks</i> - Social Media: Facebook / Twitter / Yo / 4Chan - Design tradeoffs - Networks properties
10/18	Extended Fall Break — NO CLASS
10/25	<i>Human Computation and Crowdsourcing</i> - Crowds and platforms - Problem solving - Real-time interactive intelligent systems
11/1	<i>Privacy (and security)</i> - The role of anonymity in online platforms - Privacy in crowdsourcing (for workers, and in crowd-powered systems) // Note: WSL traveling — guest lecture
11/8	<i>Games and incentives</i> - Game theory, prediction markets - Collective intelligence and emergent behaviors - Gamification / social and multiplayer games
11/15	<i>Special Topics and Course Review</i> - Graph/network theory - Social Network Analysis / NLP overview
11/22	Thanksgiving Break - NO CLASS
11/29	[[BIG QUIZ]]
12/6	[[Final project presentations]]
12/11	Last day of classes - NO CLASS (this is a Tuesday) FINAL PROJECT CODE + WRITEUPS DUE TODAY

Grading

The final grades in this course will be determined by a mix of small daily quizzes, one ‘big quiz’ on March 28th, and a large course project (with several intermediate steps along the way). The approximate weighting is:

Participation: Up to 3% Extra Credit (some/good/excellent participation levels)

Quizzes: 12%

In-class “studio” assignments: 10%

‘Big Quiz’: 16%

Project Steps / Mini-Tasks: 40%

Individual Assignments: 12%

Final Project Presentation, Code, and Report: 20%

I understand that occasional absences are unavoidable. As such, your **single** lowest quiz OR in-class assignment will be dropped. An additional missed quizzes will likely not significantly affect your grade, but missing several almost certainly will. Quizzes will most often occur at the end of lecture, before project studio begins.

Late Policy

Assignments are expected to be completed on time. However, for unavoidable situations where this is not possible, you may use up to 1 late day (24 hours) per assignment for a penalty of 10%. This only applies to intermediate project phases and assignments, not to quizzes or presentations. Anything submitted more than 1 day late will receive 0 credit.

Participation

This is intended to be a highly interactive class. As such, I'd like everyone to come to every class. Participation is a non-trivial portion of your grade, and we give you plenty of ways to participate, so there should be no excuses for not being active in the class!

Extra Credit Readings

Extra credit is available from (optional) paper reports on the weekly recommended readings (or other paper by permission of instructor). These reports will be graded on a [0,1,2] scale, with 0 (minimal effort) resulting in no extra credit, 1 (reasonable effort / insight) resulting in 0.25 points of extra credit, and 2 (great effort / insight) resulting in a half point of extra credit added to your final grade. No more than 6 assignments will be counted, and all reports must be turned in in PDF format. More details are available [in this document](#).

Assignment Submission

For each (individual) assignment, you will be required to write some code. To make this easier on our minimal teaching staff, your projects should all be submitted in Canvas as a .zip file containing project code, and a PDF containing README content (setup / usage instructions) and a link to a hosted version of your code. This should cost ~\$20 for the semester through a service like Digital Ocean. We don't ask you to buy a textbook in this class, so this is a relatively low resource cost. The exact choice of service/platform is up to you (e.g., feel free to go with something easier to deploy on, like Heroku), as long as the result is a link that we can go to from any browser and see your webpage working. The university may also have ways to get configurable webspace. All of our testing will be done using the latest stable version of Chrome.

MDE Project

This course will have a large team-based project that will require designing and building a Social Computing system. After group formation, an initial 'pitch' document and in-class presentation will help teams get feedback on their ideas. After that, there will be a few milestones on the way to a final project document and presentation. The objective of this project is to build a system from the ground up that really works in practice. Be creative! You will also release these projects as open source by the end of class.

Honor Code

All students (including LS&A and Engineering) are required to observe the Engineering Honor Code in all assignments and exams. A copy of the honor code can be found at <http://ossa.engin.umich.edu/honor-council/>. Please make sure that you clearly understand what constitutes cheating. If you are not sure in any specific case, you should ask the teaching staff. The University takes honor code violations seriously, and penalties can be severe. You are not allowed to share your code with anyone other than your partner. You are not allowed to make use of project or homework solutions by others, including solutions from previous semesters. Make sure that you do not upload your code on github public repositories, as this also constitutes violation of the honor code.

Any suspected violations of the honor code will be reported. (Please don't give me extra work...)

Disabilities and Conflicts

Students with disabilities that are documented with the Services for Students with Disabilities (SSWD) Office should contact the professor during the first three weeks of class to make appropriate arrangements.

