

Fall 2016

CS492: Crowdsourcing (Special Topics in Computer Science)

Course Website: <http://kixlab.org/courses/crowdsourcing/>

Time: 2:30-3:45pm Tue/Thu

Location: N1-422

Instructor: [Juho Kim](#)

TA: TBD

Office Hours: 1-2pm Fri @ N1-605, or by appointment

Course Description

Crowdsourcing has successfully solved a wide variety of real-world problems. By inviting lots of people to participate in the problem solving process, crowdsourcing has tackled problems that neither computers nor humans could solve alone. Common application areas include data collection and labeling, collaborative ideation and problem solving, citizen science, education, and accessibility. In building a successful crowdsourcing system, important challenges arise in recruitment, incentive structure, task design, workflow design, quality control, data processing, and ethics, just to name a few. This course will cover major design issues and computational techniques in building crowdsourcing systems. You will (1) read, present, and discuss important papers in the field, (2) make, run, and analyze crowdsourcing tasks, and (3) design your own crowdsourcing system as a final project.

Course Structure

Each class will consist of a short introduction of the topic, followed by interactive components, such as student presentations, group discussions, exercises, design activities, and design feedback sessions. You need to bring your laptop to every class. There will be no "lectures".

Activities

- Topic Presentation (1-2 times / semester)
- Reading Response (each class)
- Assignments (once every week or two)
- Final Project

Grading

- Topic Presentation: 20%
- Reading responses: 20%
- Assignments: 20%
- Final project: 30%
- Class participation: 10%

Prerequisites

There are no official course prerequisites. But assignments and the final project will require building features of a crowdsourcing system, so programming skills are needed. Knowledge or research experience in HCI or social computing is useful, but not required.

Tentative Schedule

Week	Topic
Week 1	Introduction to crowdsourcing and human computation
Week 2	Crowdsourcing systems, platforms, and workers
Week 3	No class (Chuseok)
Week 4	Technique: programming paradigms
Week 5	Technique: quality control
Week 6	Technique: crowd agents, realtime crowdsourcing
Week 7	Design: workflow design & task decomposition
Week 8	Project Proposal Pitches & Feedback
Week 9	Design: incentive mechanisms & gamification
Week 10	Design: experiments & analysis
Week 11	Application: data labeling, machine learning, computer vision, NLP
Week 12	Application: can the crowd learn? Learnersourcing, education, feedback

Week 13	Application: citizen science & civic engagement
Week 14	Application: teamwork, expert crowdsourcing, accessibility
Week 15	The future of crowd work
Week 16	Final Project Presentations & Poster Session