

## **Crowdsourcing and Human-AI Interaction**

[EECS 598 – Special Topics]

Lecture: Mon 1:30-6:30pm / Discussion: Fri 1:00-2:00pm

Instructor: **Walter S. Lasecki** (<http://wslasecki.com>)

### Overview:

Artificial Intelligence (AI) systems need to be able to interact effectively with people, either because their goals fundamentally involve people (e.g., conversational systems), or because a human-AI team is more effective than either alone. While this problem is similar in nature to many faced in fields like Human-Computer Interaction (HCI), it is increasingly clear that interaction with boundedly-intelligent AI agents differs in important ways from the classic problems studied in HCI, where most interactions were with computational *tools*, not intelligent agents. At the same time, the limitations of AI systems in the foreseeable future mean that the literature on human-human teams is also insufficient on its own to describe the challenges faced in Human-AI Interaction settings.

This course will cover topics in Human-Computer Interaction, human computation and crowdsourcing, and the emerging literature in Human-AI Interaction, with a focus on techniques for creating interactive intelligent systems that leverage a combination of human and machine intelligence to accomplish tasks more effectively than either could alone. We will also touch on the theory underlying many of the current approaches (e.g., game theory, voting theory, reasoning under uncertainty, and machine learning), and potential ethical concerns raised by these systems (e.g., safety and end-user privacy).

### Course Plan:

Lecture periods will include an interactive (discussion/activities) component, and material will be based on readings from the recent research literature, and student-selected projects that yield experience in implementing systems that leverage human and artificial intelligence, while maximizing overlap with research interests.

### Required Skills:

This course will include a significant project component that requires students to develop usable software systems. Knowledge of basic web development is important, since it will not be covered in detail as part of the lecture content.

**Pre-reqs:** Graduate standing in CSE or SI.