

I'm a second-year PhD student in the David R. Cheriton School of Computer Science at the University of Waterloo. I hold an MS and BS in Computer Science from Middle Tennessee State University. I spent the second year of my Master's program working as a research scientist at the University of Oxford (UK). My master's thesis focused on the *Ancient Lives*<sup>1</sup> crowdsourcing project, which asks volunteers to transcribe deteriorated ancient Greek papyrus fragments. Before graduate school, I spent two summers as an intern at Oak Ridge National Laboratory working on automated methods for breast cancer detection in mammograms.

Today, my work focuses broadly on (1) novel ways to combine human and artificial intelligence at web-scale and (2) how crowdsourcing can be leveraged to drive discovery in science and the humanities (*i.e.*, citizen science). In order to answer these questions, I built *Curio*<sup>2</sup> – a mixed-expertise crowdsourcing platform that enlists the help of both paid crowd-workers and volunteers to drive discovery. The platform currently has 6 unique projects, encompassing the fields of medical science, ecology, music, climate science, urban noise pollution, and human-computer interaction, with a number of developing projects, each driven by some research question in their respective field. An Experiments module is built-in to the platform for assessing new worker quality metrics, task routing procedures, etc. I'm always looking for feedback on how we can make our system more interesting.

A key limitation of Curio is that it does not currently support the self-management of these projects by the affiliated research team, and the perception of "ideal" project management can vary. Are there different styles of project management? As a crowdsourcing project's manager, what would you want to configure, control, and manage? Is there something that you don't want to manage? I'm looking for feedback related to delegation and collaboration shaping management in particular.

As with most public-facing systems, crowdsourcing systems included, participants often have varying levels of expertise and come from a variety of backgrounds. Beyond creating the "ideal" platform for crowdsourcing, I'm also interested in the integration of intelligent agents into sociotechnical systems as a solution to the challenges and limitations introduced by participant expertise: what are the instructional limitations of an agent? What type of instructional interaction should an agent facilitate? Should an agent have a persona? Are workers even interested in help from an agent? Crowdsourcing is a utility that thrives on civic engagement, and I'm looking for feedback on how these questions can be answered with a focus on encouraging civic participation.

Research questions aside, I'm hoping that I can walk away from CSST with a better understanding of how I should be developing as a researcher and what I should be giving my attention (*i.e.*, When should I start looking at the job market?). In short, I'd like to get a clearer vision of the researcher I want to become by the end of my PhD.

---

<sup>1</sup> <http://www.ancientlives.org>

<sup>2</sup> <https://www.crowdcurio.com>