

Security Research for Augmented Reality Systems

Experiential Learning Category

Research

Summarize your proposed experiential learning activity, including the primary focus of your activity, your intended actions, and the expectations of your supervisor and/or organization/partners.

My activity is research in the CSE Security and Privacy Lab, helping with the current work on security in augmented reality (AR) systems. I will work on auxiliary components for a system that is being prototyped. By coordinating with my research mentors I will integrate my work with the rest of the system, tailoring my focus based on the current state of the rest of the system and following along with the iterations thereof.

Explain how your activity demonstrates the values of the Honors Program Experiential Learning area you selected. Rather than reiterating our definition, outline how your activity embodies this definition.

My work in augmented reality will prompt me to think critically about this emerging area of technology, identifying possible methods of attack on or harmful misuse of such a system and considering ways to build these systems more robustly. It will allow me to work on a project where there is no solutions manual, thereby stretching my analytical and creative problem-solving skills.

How and why did you select this engagement? What skills or experiences do you hope to gain from it?

I love practically all facets of CSE and I love that security is a topic that spans all of them. Systems can be built better when it's understood how they break, and I hope to gain a better understanding of computing systems by looking at them through the lens of computer security. I am excited by the prospect of solving problems that no one has solved before; security research, then, is a terrific combination of my interests.

How does this activity connect to your concurrent or past coursework? How does it speak to your broader education goals and experiences?

In the Direct Admit seminar last quarter, I heard a number of research talks, including one from one of the professors in the Security and Privacy lab. I was fascinated by the kind of questions that are asked in the field, and by the field's alignment with my longer-term goals to become a better computer engineer by delving deeper into CSE and learning to build elegant, functional, robust computing systems.

How will your activity contribute to the larger goals of the organization/your partners?

My activity will augment the work the lab is doing in the topic of AR systems by helping in the construction of an experimental model that makes more tangible certain AR concepts that the lab has previously developed. I will be contributing some key supporting components of this model as well as additional thoughts on the functionality of the system as applicable.