The ability to support students on their journey is not a by-product of research, but a core reason why I wish to be a faculty member. To motivate, I use historical and current real-world events when framing lectures; to teach, I use evidence-based techniques taught to me in pedagogical programs. I have refined these techniques by developing/teaching lessons, managing courses, and mentoring students. As a new faculty member, I intend to develop and teach special topics courses that focus on risks of emerging technologies and inclusive security, alongside traditional human-computer interaction, and security courses.

Teaching Philosophy. Computer science is inherently practical: topics were created to solve important problems. Thus, there exists a large number of convincing real-world motivations to engage students with. While lecturing, I've found great success in framing concepts around these concrete examples. For security specifically, I focus on instances where exploitation causes harm to individuals and causes real downstream impacts on people's economic, emotional, and physical safety. In doing so, I encourage a sense of gravity and ethical duty when approaching security topics.

Once motivated, I use evidence-based techniques promoted by the Learning Assistant Program[1] to teach concepts. I employ active learning techniques, such as small break-out group problem-solving, to encourage a critical understanding of knowledge *during* lectures. In addition to improved retention, I've found that facilitating group work also fosters student kinship, lessening the chance for students to be isolated and "fall through the cracks". I intentionally ask questions that are less recall-centric ("What are stack canaries?") but rather encourage higher levels of cognition ("How would we design a mechanism to prevent stack overwriting?"). I've found these make students feel less like passive observers and more like active participants. As a faculty member, I hope to continue collaborating with the Learning Assistant program to provide students with additional pedagogy and learning assistants with teaching experience.

Teaching Experience. I began teaching at the collegiate level through the Learning Assistant program, in which I assisted computer architecture (*CS33*) and took weekly pedagogical lectures to learn effective teaching methods. In computer architecture, I held weekly office hours, reviewed content, and guided students in projects. Despite all students being a part of the same class, I was surprised by the diversity of backgrounds that people came in with and enjoyed the challenge of accommodating each student's needs. In the Learning Assistant pedagogical lectures, we reflected on our teaching experiences the prior week and were taught new evidence-based techniques to apply the following week.

In my graduate career, these techniques were refined and harnessed. I learned how to manage courses as the sole Teaching Assistant for advanced computer security (*CS463*). Due to COVID, I had to manage new project schedules, modify project content, and remain effective over the new Zoom-based medium. I learned the importance of providing clear expectations to reduce students' anxieties, especially during uncertain times. I also held office hours, graded assignments, and responded to students' questions. In the following semester, I returned as a guest lecturer for advanced computer security (*CS463*). Over a 90-minute lecture I developed, I discussed the seminal works of deepfake threats and mitigations.

I learned how to make academic content accessible to a variety of audiences by creating security content for K-12 graders. I volunteered for the past four consecutive years at Illinois CS SAIL, a program that introduces high school students to university-level computer science. In my self-developed "Cybersecurity Ninja Training" course, I guided students through a simple but practical interactive cybersecurity exercise. Students worked their way through a series of real exploits that cover the topics of human factors, cryptography, as well as web and software security. Through this, students learned how vulnerabilities can lead to disastrous results and protect themselves online. I also collaborated with Futurum Careers magazine to translate my deepfake research into a resource for K-12 classroom learning[2].

Mentorship Experience. By assisting four undergraduate researchers through successful research projects, I discovered how to be an effective and supportive mentor. One of the most salient lessons I've learned is how essential the cultivation of student-project ownership is for the motivation and success of students. To foster this autonomy, I try to leave projects open-ended enough for students to come up with creative

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[1] Learning Assistant Alliance. https://www.learningassistantalliance.org, 2023.
[2] "Can you trust what you see online?" https://futurumcareers.com/can-you-trust-what-you-see-online, 2023.

solutions and in a sense, teach me. I also consider any suggestions they have for the project, and ultimately, respect them as burgeoning researchers.

Much like pedagogy, students cannot be mentored in the same manner due to their diverse backgrounds and working preferences. Therefore, figuring out the right balance between space and support is essential. To achieve that, I make it a priority to set up clear and frequent (yet not overbearing) communication channels with all my students, such that they can feel comfortable reaching out for advice or discussions at any time. These experiences have proven successful; each student completed their research goals and two were able to publish their findings at *USENIX Security* and *ACM CHI*. All of my mentees who have completed their undergraduate degrees have continued to graduate school.

Courses I Am Interested In Teaching. I am well-suited to teach security and privacy, as well as computer-human interaction courses at both the graduate and undergraduate levels. My research expertise makes me well-suited to develop research-seminar courses on human-relevant risks in emerging technology (e.g., machine learning systems, large language models), and inclusive security and privacy.

Diversity and Inclusion in Teaching. To ensure that all students can benefit from education, the promotion of inclusion and diversity is essential. Stereotype threat and implicit biases in educators harm learning and must be mitigated to promote the success of all students. To the best of my ability, I will mitigate these effects in the classroom by encouraging the participation of all students and integrating relevant culturally diverse examples whenever possible. I also believe that promoting researchers from underrepresented groups is essential for cultivating an environment in which everyone can thrive. In my own research, I've recruited several mentees from programs that promote underrepresented groups such as CRA-widening participation, DHS-Minority Serving Institutions, and Illinois CS STARS.