Teaching to me, is not only about transferring knowledge but about inspiring curiosity, integrity, and self-discovery in future generations of learners. My journey as both a lifelong student and an educator has shown me that teaching is an act of learning in itself—of constantly evolving through empathy, humility, and engagement. I have been deeply influenced by the teachers and mentors in my life, including my parents, who served as professors and principals in Civil Engineering departments at government colleges in India. From them, I learned that a teacher's greatest impact lies in treating every student with respect and nurturing their individual potential. In India, we say "the teacher is equivalent to God," and while that phrase is deeply cultural, its essence that teaching is a sacred responsibility remains universal.

**Early Foundations of Teaching**

My passion for teaching began in school, where high-performing students were encouraged to step in for teachers who were unavailable. Standing in front of a classroom of peers, explaining math or science concepts, and seeing them understand was both empowering and formative. Teachers would specifically request me to lead such sessions, which instilled a sense of responsibility and purpose. Managing my own studies in the morning and teaching in the afternoon helped me develop discipline, empathy, and communication skills at an early age.

During my undergraduate years, I shifted from academic teaching to mentoring through the performing arts. As the lead of a dance group of fifteen members, I learned how to teach choreography, manage diverse personalities, and build a culture of collaboration. I also led the team at local and national competitions, coordinating rehearsals, logistics, and peer feedback under intense deadlines. Dance taught me that teaching is not about hierarchy—it's about leading by example, fostering trust, and motivating others to reach their potential. Those lessons in leadership and inclusivity continue to inform my classroom approach today.

**Formal Teaching Experiences in Higher Education**

My first formal teaching appointment came during my master's program at Arizona State University (ASU), where I served as a Teaching Assistant (TA) for an *introductory programming course in Java (CSE 110)*. CSE 110 is an introductory programming course taken by students across many disciplines, including psychology, mathematics, history, and other non-computing majors, in addition to computer science students. I was offered this opportunity in my very first semester, while I was still adapting to a new country and academic culture. My weekly responsibilities included leading four one-hour lab sessions with approximately 25 students each, grading lab assignments, and holding two-hour office hours that were consistently well attended. I also helped redesign the CSE 110 lab curriculum by creating new in-class exercises that responded to student feedback about workload, ensuring labs remained hands-on and achievable within class time without adding to their weekly assignment burden. One of my students recognized my efforts through the *ASU SUN Award*, which honors excellence in supporting university goals—a humbling reminder of the value of patience, empathy, and attentiveness in teaching. Working with such a diverse group of learners gave me a deep appreciation for interdisciplinary engagement and the importance of tailoring examples and explanations to different learning styles.

Later, as a Ph.D. student, I served as a TA for *CSE 365: Introduction to Cybersecurity*—a *large* class of about 560 students—covering topics such as access control, web security, network security, cryptography, and authentication. This experience deepened my understanding of how to teach complex technical concepts in an accessible, motivating way. I learned to create bridges between abstract principles and real-world applications, helping students see how security is as much about people and ethics as it is about technology.

**Mentorship and Learning Through Collaboration**

Beyond formal classrooms, I have found mentorship to be one of the most rewarding aspects of academia. I have mentored Ph.D., undergraduate, and high school students from diverse backgrounds, introducing them to the field of human-centered security. Many perceive cybersecurity purely through the lens of technology—hacking, encryption, or networks—but I emphasize that humans are integral to every layer of security. I encourage my mentees to question assumptions, to understand user behavior, privacy, and consent, and to recognize ethical considerations not as compliance tasks but as essential elements of meaningful research. I believe that open conversations—where students and mentors learn from each other—are the key to strong scientific collaboration.

My mentorship has led to tangible successes that reinforce the importance of early guidance. The undergraduate mentee has two successful top-tier papers in security and human-computer interaction and has decided to pursue graduate studies in computer science and cybersecurity. Out of the five high school junior and senior interns I have closely mentored through an eight-week summer research program, one has chosen to continue our collaboration by extending the project into the educational technology domain; we plan to submit this work to a usable security and

privacy venue early next year. Within my lab, I have co-authored publications with junior Ph.D. students and guided them through defining research goals, shaping project direction, navigating ethics in research, planning data collection and analysis, and ultimately preparing high-quality submissions for top-tier security venues. I strive to maintain open and regular communication with my mentees, creating an environment where they feel genuinely supported and confident initiating conversations about their work, progress, ideas, or challenges. Seeing mentees evolve from hesitant beginners into confident, independent researchers—and publishing their completed research works at top-tier venues such as *IEEE S&P, ACM CCS* and *ACM CHI*—has been one of the most fulfilling experiences of my academic journey.

### Learning with My Advisor

My earliest research experiences also deepened my understanding that learning is a shared journey. When I began exploring *human-centered security*, the field was new to me and my advisor, whose expertise was in *web security*. Together, we navigated new literature, designed studies, and discussed unfamiliar ideas. Those collaborative learning moments reminded me that *a teacher is also a learner*, and that curiosity and humility are the foundation of growth. This perspective has profoundly shaped how I teach and mentor: by inviting students to co-learn, question, and discover alongside me.

### Teaching Philosophy

My teaching philosophy is guided by three core principles: *curiosity, communication, and continuous learning.*

1. Curiosity drives engagement. I aim to design learning experiences that invite students to ask "why," to explore beyond the slides, and to apply concepts creatively.
2. Communication is the cornerstone of understanding. I aim to emphasize clear reasoning and justification in both technical and written work, helping students articulate their thoughts effectively.
3. Continuous learning ensures growth—for students and for me. Each class, each question, and each challenge offers an opportunity to refine my approach and to stay intellectually alive.

### Future Teaching Plans

I plan to teach and develop courses that reflect my research interests at the intersection of human factors and cybersecurity. One course, *Human Factors in Cybersecurity*, would explore foundational topics including research methodologies, ethics, open science, and meta-research, helping students understand the social dimensions of security. Building on these foundations, an advanced course, *Organizational Cybersecurity*, would be focused at examining how enterprise structures, culture, and policies influence collective decision-making about security design, budgeting, and implementation. In both, I aim to place human factors at the center—empowering students to see cybersecurity not as a purely technical problem but as a human one.

In developing these courses, I plan to adapt from successful teaching models established by educators such as Michelle Mazurek at the University of Maryland and Lorrie Cranor at Carnegie Mellon University. Their approaches to teaching human factors in security and privacy balance technical rigor with human-centered inquiry and empirical evaluation. Through the usable privacy and security course, Cranor emphasizes that technology alone cannot solve all security and privacy problems; human factors are essential. Similarly, Mazurek's courses emphasize the importance of empirical design and methodological depth while guiding students connect theoretical insights with real-world systems and practices. I intend to design courses that blend interdisciplinary readings, applied projects, and research-based learning experiences, encouraging students to think critically about both human behavior and secure system design.

With the ongoing digital transformation of education, I believe teaching itself must adopt a digital-first mindset while remaining pedagogically adaptive. The availability of platforms such as *pwn.college* has shown how digital ecosystems can revolutionize accessibility and engagement in technical learning. However, effective teaching in this age of artificial intelligence (AI) cannot rely solely on take-home assignments or asynchronous materials; it requires a balanced, hybrid approach that integrates active learning, discussion, and reflection. To overcome the cons of AI use, I plan to implement seminar-based structures where students critically engage with research papers, theories, and project ideas. Generative AI tools may be used to refine and expand their thinking, but I will emphasize that critical reasoning, creativity, and ethical judgment must remain at the core of learning. To better understand the status quo and grow along the way, I intend to have continuous communication with fellow instructors to share strategies, reflect on challenges, and refine my teaching strategy and style. I also plan to stay informed through evidence-based research on teaching practices to ensure that my approach remains adaptive and grounded in proven methods.

Ultimately, my goal as a teacher is to cultivate independent thinkers who are empathetic, ethical, and inspired to make meaningful contributions. Teaching, for me, is not a duty but a dialogue that I look forward to continuing throughout my academic career.