

Coming from a family full of teachers, I have always loved sharing my knowledge with students. Touching someone's life through education and later seeing them as successful members of their communities always have given me immeasurable happiness.

Teaching Experience

I started my academic career as a Ph.D. student. Since then, I have had several different types of teaching experiences.

Teaching Assistantship Roles: During my graduate studies, I worked as a Teaching Assistant for the following classes:

- EEL 6787 - Network Security,
- EEE 4717 & EEE 5718 - Internet of Things-Cyber Physical System (CPS) Security,
- TCN 4081 - Telecommunication Network Security,
- EEE 4717 - Introduction to Internet of Things-Cyber Physical System (CPS) Security.

As part of my TA duties, I was very active in helping with every class activity such as the design of the classes and grading the homework and exams for these classes. Aside from that, I was a substitute lecturer for my advisor from time to time. Additionally, I gave lectures on Homomorphic Encryption every semester for these classes.

Mentoring as a Postdoc: As part of my postdoctoral responsibilities, I have been privileged to offer guidance to numerous graduate and undergraduate students. Namely, I have advised five PhD students within our institution and one visiting PhD student from Italy. On the other hand, I mentored four of our MSc students and one visiting female MSc student from Italy. Of these, 15 were minority students (i.e., six Hispanics, twelve females, and two African-Americans). Beyond graduate students, I also took on a mentorship role for numerous undergraduates. This included students from the summer NSF-funded Research Experience for Undergraduates (REU) program; the students who came as part of FIU and Miami-Dade College (MDC) collaboration as well as the students hired for the Microsoft IoT Lab Design Project.

Throughout these mentorships, we (I and my professor) meet twice a week: one for an individual progress meeting and another one for a group meeting. My job duties included finding a good research topic, guiding the students on how to conduct research, and how to write scientific papers. This also involved improving their communication skills, promoting professionalism, and encouraging the students to keep their productivity high in their work. These experiences have not only enriched my teaching practice but have also equipped me with a broader perspective on education, paving the way for interdisciplinary and inclusive teaching methodologies.

Class and Lab Design: For the Microsoft IoT Lab Design Project, we received funding to design IoT labs for undergraduate classes. These labs include hands-on experiences with devices like smart home hubs, cloud setup, Wi-Fi network traffic capturing, and Raspberry Pi configurations. I was instrumental in designing the IoT labs for the Internet of Things course. Subsequently, I also helped students during the experiments and provided clear instructions for each lab activity. This experience substantially enhanced my understanding of class and lab design, especially in an evolving domain.

Educational Research: The NSF project "EAGER: SaTC-EDU: Designing and Evaluating Curricular Modules for Inclusive Integration of Artificial Intelligence into Cybersecurity" addresses the challenge of effectively incorporating AI into

cybersecurity curricula. As part of the project, we designed highly adaptable AI curricular modules that can easily be leveraged by non-AI cybersecurity educators and inserted into existing cybersecurity courses, with each module associated with a suite of potential insertion points. My involvement in this project provided valuable insights into curriculum design and enriched my professional experience in teaching.

Teaching Philosophy

Here's how I approach to teaching:

- Understanding over memorizing: To me, learning and teaching are strongly connected. When I learn something new, I always try to grasp the logic behind it, not just the new information itself. This deep understanding allows me to easily adapt to new or similar knowledge. Therefore, my teaching philosophy will also be similar, in a way that helps students understand not only the knowledge itself but also the reasoning behind it, preparing them to easily adapt to new information and concepts.
- Using technology smartly: Technology is evolving quicker than ever. With COVID, we got used to remote learning and platforms like Canvas so the teaching methods adapted. After the release of ChatGPT to the public, now, teaching has to evolve in a way that takes its existence into account. Technology can not be ignored or unseen. Therefore, embracing and integrating these tools is paramount and I'm all for using these tools to make learning more exciting and interactive.
- Including everyone: Every student brings something special to the table. My time mentoring has shown me the importance of understanding and valuing each student's unique perspective.
- Keeping the feedback loop open: While teaching and grading the student is only communication from the professor to the student, hearing students' opinions and adapting the class accordingly is crucial for productive teaching.

Teaching Interests:

In addition to similar classes (e.g., IoT and Network Security) that I helped my professor with during my TA and postdoc duties, I am also interested in teaching the new classes.

1. **Privacy Enhancing Technologies**: This class will be an applied cryptography class and will teach tools like Homomorphic Encryption, Secure Multiparty Computation, Differential Privacy, and other related cryptographic constructions (e.g., Zero-Knowledge Proofs) utilizing different devices/technologies.
2. **Blockchain Security**: This class will include the blockchain basics, smart contracts, Decentralized Finance (DeFi), Non-fungible Tokens (NFTs), and their security issues.
3. **Security of Emerging Technologies (e.g., blockchain and IoT)**: This class will be more introductory and will cover blockchain, IoT devices, modern web applications, and their security.

For all these classes, my goal is to ensure a balanced combination of theory and hands-on experience supplemented with practical lab sessions.