

Teaching Statement

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One of the most memorable moments of my undergraduate education was when a professor I had never met welcomed me by name, held the door for me, and asked several students—whom he also addressed by name—to make room for me in their row. His actions communicated that I was not anonymous, that my presence mattered, and that my success was important to him. I have carried that experience into my own teaching philosophy: students are better able to undertake difficult intellectual work when they first believe that they belong to a community of learners and that their instructor is invested in their success. I therefore seek to create learning environments in which students feel individually recognized, appropriately challenged, and supported as they develop confidence with unfamiliar ideas.

Caring for students does not mean shielding them from struggles or challenging topics; quite the opposite. To me, truly caring for students requires bolstering their own self-efficacy to navigate the path toward meeting rigorous expectations, engendering the confidence that only comes from facing and overcoming problems. As someone who has a passion for hands-on technical work and is committed to studying, teaching, and researching technology, I'm deeply empathetic to students who may at first feel intimidated by complex technical course material. I seek to make technically complex material approachable by beginning with what students already understand and then progressively revealing the underlying computational problem. In a guest lecture on computer vision and convolutional neural networks, for example, I began by asking students to determine whether several images contained a cat—a task they initially regarded as almost trivial. I then asked them to explain how they knew, using their difficulty articulating that process to illustrate the complexity of teaching a computer to interpret visual information. From there, I used human visual processing as an intuitive bridge to concepts such as receptive fields and hierarchical feature extraction. During an interactive activity, I revealed images one small section at a time and asked students to identify the image and the features that informed or misled their judgments. Only after students had developed this conceptual foundation did I introduce the mechanics of kernels, pooling, feature maps and the like. I incorporated questions throughout the lecture that allowed me to assess understanding before moving forward. I concluded by connecting image classification to real-world applications, particularly in healthcare. This progression—from familiar experience, to conceptual model, to technical detail, to authentic application—reflects how I aim to help students develop both confidence and genuine understanding when encountering unfamiliar technologies. The course instructor invited me to deliver the lecture again when the course was next offered, giving me an opportunity to refine the lesson based on my earlier experience. After the second lecture, one student reported that her self-assessed understanding of CNNs had increased 'from a 4 to a 7', while another emailed to express appreciation for the hands-on activities and step-by-step explanation of convolution.

My commitment to building students' confidence also shapes how I approach mentorship, practice, and feedback. As a teaching assistant for an Advanced Excel course, I supported approximately 120 undergraduate and graduate students as they learned techniques ranging from financial calculations and goal seeking to VBA programming. In exam reviews and project feedback, I sought not only to explain how a tool worked, but also to help students recognize how they could apply it in future courses, professional settings, and everyday problem-solving. I took a similar approach while tutoring Honors students with limited science backgrounds in an interdisciplinary course involving introductory physics and cultural understanding. Later, in a doctoral seminar on artificial intelligence and machine learning, I

advised PhD students on their research proposals and provided feedback on their engagement with the literature. Across these settings, I have found that students engage when their instructor exudes interest in both the students and the course content. Once engaged, students gain confidence when they have opportunities to apply unfamiliar concepts, receive feedback before a final evaluation, and revise their thinking rather than being judged solely on their first attempt.

I also view effective teaching as an iterative and evidence-informed practice. Through the Center for the Integration of Research, Teaching and Learning, I have completed training in evidence-based undergraduate STEM teaching, active learning, and facilitating difficult classroom dialogues, and I am completing the CIRTl Associate Teaching Program. This preparation has helped me translate my commitment to student care into concrete practices. At the beginning of a course, I plan to use a brief survey to learn about students' backgrounds, interests, prior experience, professional goals, and concerns about the subject. In smaller courses, I can respond to students individually; in larger courses, their responses can inform examples, activities, and targeted outreach. I also intend to collect informal midsemester feedback so that students can identify what is supporting or impeding their learning while there is still time for me to respond. These practices communicate that students' perspectives matter while also making me accountable for continually improving the learning environment. Feedback and open lines of communication also help develop communication and dialogue in the classroom that helps support active learning. As a technologist, hands-on application of technologies to real-world problems and group discussions and activities to encourage ideation and joint solutions is important to me. An active learning approach is ideal for teaching technical content, and I will continue to employ this approach in my teaching.

As I prepare to lead courses of my own as a faculty member, I am equipped to teach subjects such as artificial intelligence in business and cybersecurity management because I serve as a teaching assistant and guest lecturer for these courses that my dissertation co-chair teaches. I also have technical skills, industry experience, and have taken courses on topics such as artificial intelligence, data analytics, project management, web development, and graduate seminars on emerging technologies and research methods. I have developed strong technical skills and would be comfortable with and able to develop course content for a variety of technical courses. I also have experience managing projects and could teach managerial IS courses. When teaching technical courses, especially on emerging technologies such as AI, I think it is important to integrate technical skills with organizational relevance and application. For example, an AI course that combines technical foundations with organizational applications, ethical analysis, and hands-on evaluation of AI systems can be highly effective for business students. Regardless of the subject, I want students to leave my classroom with more than knowledge of particular tools or theories. I want them to understand how to approach unfamiliar problems, to trust their capacity to learn difficult material, and to know that their instructor regarded their development as an important part of the work of teaching. I have a passion for teaching, enjoy learning from students and colleagues to further develop my own teaching skills, and am excited to contribute my skills to the needs of my university and its students.