Teaching provides a unique opportunity to shape others and make a difference in their lives. Particularly in Computer Science, where rapid advancement significantly impacts everyone's life, it is essential to educate future generations with a global perspective that values human diversity and encourages responsible and inclusive solutions for the betterment of society.

Throughout my journey as a student, researcher, mentor, and teacher, I have come to highly appreciate the importance of creativity, kindness, and collaboration and I embrace these in my teaching and mentoring. I believe it is essential for educators to **balance sharing knowledge and fostering exploration**. How we evaluate progress in the learning process can hinder creativity and exploration, as fear of mistakes stifles originality. Thus, I prioritize **instilling a growth mindset in my students by praising their effort and determination rather than intelligence**. This supportive approach impacts their willingness to persevere through challenges and raises their confidence as learners. At the same time, the rapid advancement of AI technology is opening up opportunities for **personalized learning and reducing standardization practices that hinder creativity**. I am excited about developing this technology in the classroom, and particularly on **how AI can attract and retain more minorities in CS**.

My Teaching Experience

At the University of Michigan, I have acquired substantial teaching expertise through various roles such as Primary Instructor, Teaching Assistant, and Engineering Teaching Consultant.

As a **Primary Instructor** for the newly launched Discover CS class, I took a hands-on approach to all aspects of the class. From promoting it to student advisers and posting flyers at campus bus stops to creating teaching materials and gathering student feedback, I was fully invested in ensuring the program's success. The class is constantly evolving, with improvements made based in response to feedback from previous years. In the future, plans are in place to develop even more effective lesson plans through data analysis, making Discover CS an excellent opportunity for *personalized learning and innovation*. Teaching Discover CS has been challenging at times, particularly when dealing with conflicts among students and their varying levels of experience. However, I have learned *how to motivate students when they struggle with coding* by praising their effort and determination, sharing my own challenges when learning to code, providing resources to continue learning, and encouraging them to participate in supportive organizations like Girls in Electrical Engineering and Computer Science (GEECS) to *foster a growth mindset*.

As a **Teaching Assistant** for two different courses, Data Structures and Algorithms (EECS 281) and Data Mining (EECS 471), I gained valuable insights into the different teaching styles required for different class sizes and academic levels. In EECS 281, a large undergraduate-level course with over 1000 students, I learned the importance of *effective coordination with the other 20+ assistants and three professors*. Meanwhile, in EECS 471, a smaller graduate-level course with 50+ students, I had the opportunity to *exercise more independence and create my own presentation slides and exercises* for the Discussion Sessions. Throughout both courses, I provided 1-on-1 assistance to students, which allowed me to *develop my active listening skills and adjust my teaching approach to meet the individual needs of students*.

As an **Engineering Teaching Consultant**, my goal was to help Teaching Assistants enhance their teaching skills. Through my training, I gained expertise in using active learning activities and understanding *how growth mindset, impostor syndrome, and stereotype threat affect student learning*. During consultations with TAs, we discussed common challenges, such as *increasing student participation*. I offered solutions like *incorporating active learning activities such as "think-pair-share" and collected student feedback* to discuss it with their TAs. As a consultant, I had the unique opportunity to learn from both students and teachers, allowing me to experience various teaching styles and improve upon them. My time as an ETC was a valuable and enriching experience that significantly contributed to my development as an educator.

My Mentoring Experience

During my time at the University of Michigan, I **mentored ten students with various backgrounds and academic levels**. Working with students from different countries taught me the importance of *being adaptable and personalizing my approach. I balanced providing hands-on support with fostering independence, tailoring my support to meet each student's unique needs.* I also recognized their strengths and potential and *praised their effort and determination to promote a growth mindset and instill confidence in their abilities as learners.* All of my research collaborations with undergraduate, master's, and Ph.D. students resulted in publications at top-tier conferences and journals, which in turn contributed to their acceptance into renowned academic or industry programs. I found it most fulfilling to witness their growth in confidence and skills as the projects progressed from ideas to fully formed research publications.

I **led the NLP reading group** at the University of Michigan for four years. During that time, I encouraged active participation and created an inclusive learning environment. However, I noticed that often the same people tended to dominate the discussions, leaving the voices of minority students unheard. With this in mind, **I started organizing Launch your Confidence, a biweekly acting and public speaking workshop to empower all students**. In this workshop, I organize activities inspired by what I have learned at the local public speaking club and theatre. For instance, Improv activities such as *Yes, and...* teach one *how to actively listen, be creative, and not be afraid of mistakes.* I carefully *design the activities to involve everyone*, as I believe it is essential to have a space where everyone can participate, regardless of confidence level, and *where everyone receives a gentle nudge to step out of their comfort zone.*

As a **co-organizer for ACL Year Round Mentorship**, I have the opportunity to connect with experienced mentors and learn from their expertise. Additionally, I have gained insight into mentees' questions worldwide, which has allowed me to become a better mentor. Hosting these events is an ideal way to benefit the global community and bring researchers together to support one another. Our mentorship sessions are recorded and open access; they have been well received by the community, with the most popular videos reaching up to 2,500 views.

My Teaching Plans

Given my past experience, I am well-prepared to teach graduate and undergraduate-level courses in *Natural Language Processing, Deep Learning, Machine Learning, Data Mining, Artificial Intelligence, Data Structures, Advanced Programming, and Intro to Programming.* With sufficient advance notice, I am also prepared to teach other courses. I am particularly excited to develop a new *Multimodal Machine Learning* upper-level undergraduate or graduate-level course where students learn to combine modalities such as *language* and *vision* to solve complex real-life problems. Furthermore, I am enthusiastic about creating innovative courses in the following domains:

- *Discover CS.* An undergraduate course designed to introduce underrepresented students to coding fundamentals and the interdisciplinary applications of CS, with activities including meeting computing professionals and visiting local CS companies to learn about careers in CS. The final project would encourage students to incorporate CS into multidisciplinary projects, such as designing web pages to promote their art or automating repetitive tasks.
- *AI for Social Good.* This is an upper-level undergraduate or graduate-level course focused on all stages of project development: idea, implementation, evaluation, results, and presentation delivery. As a co-organizer of the NLP for Social Good workshop, I can use my knowledge and connections to invite NGO speakers and other potential collaborators. Many NGO projects can be solved by a group of determined students for their final project, such as data analysis or fine-tuning a powerful AI model on their data.

I aim to use these courses to collect and analyze student data, create personalized homework, build better courses, and find inspiration for AI in Education research.