Md Masudur Rahman - Teaching Statement

I vividly recall an 8th-grade teacher of mine who, despite being in a rural area with an under-resourced academic environment, instilled in me the belief that dedication could surmount any obstacle. Their encouragement altered the trajectory of my educational journey. Consequently, I excelled throughout my academic career, consistently ranking at the top during my high school, college, and undergraduate studies. This experience serves as a testament to the transformative power of motivation in education. My teaching style emphasizes encouragement, understanding individual student challenges, and delivering lectures that are both engaging and effective.

My teaching journey began after completing my undergraduate studies when I became a lecturer at BRAC University in Bangladesh, one of the country’s leading institutions. It was there that I discovered my passion for introducing undergraduates to new concepts. Over the years, I’ve observed that no subject is inherently too challenging for any student. Often, the impediment is the method of instruction. My teaching philosophy centers on understanding the student’s learning process rather than solely focusing on the syllabus content. By adopting this approach, I’ve developed tailored teaching strategies, which I continually refine based on feedback and outcomes.

Lecturing Approach and Strategies

Engagement From my undergraduate days, I was consistently drawn to educators who seamlessly blended passion, knowledge, and engagement. I aspire to be the professor whose lectures students eagerly anticipate. My pedagogical strategies focus on thorough preparation, sustained interactivity, and adaptable flexibility. During lecture preparations, I pinpoint moments to engage the class with questions. During lectures, I remain alert to spontaneous opportunities for inquiry, ensuring real-time interactivity. I patiently wait and provide further clue if required for voluntary answers before proceeding, an approach that has proven effective in fostering participation, even from reticent students. Additionally, by consistently checking for questions and actively engaging those seated farther back, I guarantee inclusivity.

Flexibility For me, the primary goal of classroom teaching is to guide students towards successful problem-solving. While I generally enforce assignment deadlines to timely complete the materials, I also acknowledge the diverse situations students face. I offer flexibility while maintaining fairness. For instance, in a course I previously taught, I employed the strategy that if students missed a lecture, they were required to submit lecture notes as an assignment to secure attendance credit, as mandated by university policy. This strategy ensured continuity in learning and prevented students from feeling left behind in later lectures.

Detailed Homework and Assignment I emphasize on developing assignment with details instruction of the questions and submission logistics. One thing I appreciate during my graduate class is that a complete and details assignment was better and often clear instruction help students learn the materials and they can spend time in learning them. Though initially, the preparation of these assignments takes a long time, it eventually reduces the number of questions and misunderstandings before the assignment due date.
Generative AI Tools  The modern era brings a plethora of educational tools, from online materials to advanced AI systems like ChatGPT. While these advancements can enhance learning, they can also overwhelm students. Recognizing this, I emphasize curating content that helps students navigate and harness these tools effectively. By combining traditional teaching methods with modern technological tools, I aim to foster an environment where students remain enthusiastic and can assimilate knowledge in a manner best suited to their learning style. As AI continues to evolve, I am excited to explore new ways of incorporating these tools into my teaching, ensuring that my students are well-equipped for the technological advancements of the future.

Mentorship Philosophy
As a research mentor, I have guided undergraduates and junior graduate students through their entire research process, from problem identification to paper submission. My approach to mentoring is adaptive, recognizing each student’s unique needs. I have had the privilege of mentoring a diverse group of exceptionally talented students. This includes guiding an undergraduate at the University of Virginia to co-author a top-tier publication, and leading a graduate student as an advisor for a collaborative paper. One student from Purdue University, during their undergraduate studies in Spring 2021, showed immense interest in Deep Reinforcement Learning. This interest continued into their graduate studies, culminating in a research-based Master’s degree. Their thesis acknowledgment read, “I thank Masudur for teaching me about deep reinforcement learning research from the ground up”. Moments like these fuel my commitment to making a lasting impact on students’ career. My mentorship philosophy centers on creating an environment that values inquiry and prioritizes students’ mental well-being. In research group meetings, I foster a dynamic atmosphere that encourages broad perspectives on technological advancements, transforming these sessions into motivational and reinvigorating discussions.

Teaching Interests
My passion for teaching and extensive experience in course development have prepared me to teach a range of subjects. I am keen to offer courses on topics like Introduction to Machine Learning, Advanced Machine Learning, Reinforcement Learning, AI in Healthcare - Robotic Surgery, and Basics of Artificial Intelligence, among others.

Conclusion
Teaching is a source of profound joy for me. I am committed to being well-prepared, engaged, and flexible, continually adapting to meet my students’ needs. My past experiences have bolstered my confidence in my abilities as an educator and mentor. As I look to the future, I am excited by the myriad opportunities to educate, mentor, and inspire the next generation of computer scientists. A driving force in my teaching and mentoring endeavors is nurturing the curiosity and potential of hard-working students. I firmly believe in every student’s inherent strength and potential. Proper mentorship can channel these attributes towards academic excellence, contributing to the collective pool of human knowledge, ultimately benefiting society at large.