Statement of Teaching Interests

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"*Education is not the learning of facts, but the training of minds to think.*"
—Albert Einstein.

1 Teaching Experience

My passion for teaching and education was ignited during my postgraduate studies when my journey in teaching began as a teaching assistant (TA) at the University of Benghazi. This role allowed me to observe and learn from highly skilled professors. After three years as a TA, and thanks to positive recommendations from professors and students, I secured a position as a Lecture Assistant (instructor) in the Electrical and Electronic Engineering department upon completing my MSc studies.

I continued my teaching journey at the University of Benghazi from July 2008 to December 2012. During this period, I held a lecturer position in the Electrical and Electronic Engineering department. During tenure at the University of Benghazi, I taught two courses each semester. These courses included Telecommunication Theory I & II, Electromagnetics I & II, Microwaves, Antenna & Propagation, C++, and MATLAB. Over time, my pedagogical skills have developed and matured through various teaching roles I've undertaken. I thoroughly enjoy teaching and all its related activities. Despite tight deadlines, I used to provide comprehensive feedback on student work. In December 2012, I left the University of Benghazi to pursue my PhD in Canada. This marked the next step in my academic journey.

In the early stages of my teaching career, I primarily focused on clearly explaining the main concepts of the subject and solving various problems in a simplified manner. Initially, I believed that this approach sufficed for effective classroom instruction. However, upon reflection after the first semester, I recognized that this instructional strategy alone did not adequately foster comprehensive student comprehension and mastery. A more multifaceted approach was essential to achieve deeper understanding among students. I recognized the importance of developing students' critical thinking skills and problem-solving techniques. I also saw the need to alleviate mathematical anxiety, rather than solely focusing on solving numerical problems. To achieve these goals, I actively involved students in the learning process. I encouraged them to ask questions and discuss practical examples. Importantly, I worked to unify seemingly disparate concepts, recognizing that many ideas repeated across different modules might initially appear unrelated. This evolution in my teaching approach has been instrumental in fostering a more engaging and effective learning environment.

Upon joining Carlton University as a Ph.D. student, I served as a teaching assistant for various courses such as Digital Signal Processing, Digital Communication Theory, Wireless Communications, Operations Research (Optimization), Computer Systems Architecture, Communications Systems Lab, Electronics II, and Computer Networks. This experience illuminated the complexity and diversity inherent in teaching in a multicultural Canadian university. Understanding the significance of fostering an inclusive learning environment, I prioritize creating spaces where every student feels esteemed, respected, and equipped to thrive.

During my time at Carleton University, as a Ph.D. student and later as a Postdoctoral Fellow, I provided mentorship to undergraduate and postgraduate students throughout various aspects of their academic pursuits, including course projects, graduation projects, research papers, and Ph.D./master's theses. Through this engagement, my perspective on teaching and learning has evolved significantly. I now perceive students as active partners in the educational process, emphasizing the importance of their active involvement in grasping the global and industrial context of their studies and adequately preparing for the demands of the job market. Drawing from my industrial experience, I have gained a keen insight into the needs of students as they transition to the job market. This understanding serves as my guiding principle, ensuring that the teaching and learning materials I deliver are aligned with equipping students for success in their future careers.

2 Teaching Philosophy

Shaped by my experiences, my teaching philosophy revolves around establishing a dynamic, inclusive, and student-centered learning environment that nurtures intellectual curiosity, encourages critical thinking, and promotes academic excellence. For my point of view, teaching is the act of communicating knowledge and coaching minds to think critically. Teaching is about stretching the brains, not just filling them with information. As Plutarch (45 AD—120 AD) said: "the mind is not a vessel that needs filling, but wood that needs igniting." To make the teaching intellectually rewarding for the students, I believe that the instructor must set high standards for the course and maintain motivating his students to adopt the deep learning approach. To make that happen, I believe that the instructor should create a non-threatening and fun learning atmosphere in which the students can explore new concepts, make mistakes, and get feedback without any judgment. Moreover, the instructor should also pose stimulating and intriguing questions that are very challenging for the students. In my opinion, teaching is about training the students to analyze and interpret the meaning of each formula or text.

3 Teaching Interests

I am prepared to teach a range of courses in Computer Science with focus on Artificial Intelligence and Machine Learning, including Deep Learning, Foundation Models, Natural Language Processing (NLP), Large Language Models (LLMs), Computer Vision, Data (text, audio, and video) Analysis, Data Structures and Algorithms, Computer Networks, Software Engineering, Data Science, Big Data, Mathematics (covering Calculus, Linear Algebra, Probability, and Optimization), Digital Signal Processing, Signals and Systems, and Cloud Computing. I am also open to teaching other subjects required by the department. Additionally, I am open to developing courses that are in demand within the industry but may not typically be part of standard computer science programs, such as Shell Scripting, Command-line Environment (Linux), Version Control (Git) and System Design. My expertise extends to effective learning methodologies, teaching strategies, and assessment and feedback practices. I am committed to delivering high-quality instruction and fostering an environment conducive to student success at Lambton Collage.