Back in the year 1997 when I got my first computer which although only had like a couple of megabytes of memory I was so fascinated by it that I grew up wanting to have a career relating to Computer Science. As I started to look deeper into it, I found it so intricate and nuanced that I knew that this is the field in which I wanted to have a career.

My interest in sciences dates back to when I was in school. I was fascinated by how the world worked and questioned everything that caught my attention. I grew up with a heavy interest in biological sciences. I loved learning about life and all the complex, detailed mechanisms which created and sustained life. It was mesmerizing to learn about how so many parts of an organism, from organs to tiny organelles, worked together to keep it alive and functioning. In junior School, when I first started working with computers, that same feeling was evoked in me. To me, Computer Science was almost exactly like studying life - how everything worked seamlessly to run a machine and perform operations was just incredible to behold.

During my undergraduate studies I was most interested in subjects like Algorithms, Machine Learning, Pattern Recognition and Image Processing. It was most fascinating to see how simple rules and ideas could give rise to the ability to solve complex problems and allow computers to “learn” things. I remember how exciting it would be to learn a new algorithm and then test it out by coding it on my computer. I was awed by how these algorithms could be applied to ideas in AI and Machine Learning and give rise to the impression that a machine could be intelligent and think and logically respond to inputs.

I have also had many courses in Programming and in Database Systems. These courses afforded me the opportunity to get a more hands-on look at the applications of computers and ameliorate my skills as a programmer. For these courses, I have completed several projects which illustrated my abilities in the courses. In my sophomore year, for my project in visual programming, I had designed and coded a simple P2P file transfer program using socket programming in java. My teacher was thoroughly impressed as I had learned a more complicated side of the language that was taught in a course reserved for more experienced students and my project received the highest grade. In my junior year, my project was to create a Student Information and Result Processing management software that could be implemented in a university. This project greatly improved my working knowledge of database concepts and, it too, received the highest grade.

I elected to do my Bachelor's Thesis on Image processing. More specifically, I performed my research on short term on-line object tracking. I was inspired to dive into the depths of this field when I did an online course on Artificial Intelligence conducted by Sebastian Thrun and Peter Norvig from Stanford University. On this course I was introduced for the first time to computer vision and I was intrigued by the idea of a machine seeing and tracking things. After doing some search on the internet regarding computer vision I found my interest on tracking objects and on that particular moment I found the TLD (Tracking Learning and Detection) algorithm developed by Dr. Zdenek Kalal from University of Surrey. The algorithm fascinated me and I too wanted to develop a tracker as efficient as the TLD. Although I did not manage to create a long term tracker like TLD, I managed on creating a short term tracker whose efficiency was greater than TLD. I am currently working on developing my work to turn it into a long term tracker.

Research for my thesis in this area, required me to devote hours to reading many published papers on object tracking, outliers rejection and motion estimation. I would peruse the papers repeatedly until I thoroughly understood them. I'd analyze the solutions proposed to solve the problems and learn the algorithms designed in the solutions. I would brood over the shortcomings of the papers and try to come up with solutions or improvements of my own. Overall, my thesis helped me to understand how meaningful a career in research could be. The more palpable benefits include a further grasp of image processing and insight into conducting research properly. At the end of the final year, my thesis was well received by the panel of professors to whom I defended it.

Alongside my research work, I was also one of the executive members of the IUT Computer Society which organizes the National ICT Fest hosted by IUT every year. As one of the Secretary of the committee, I was in charge of managing the project showcasing sector in the fest in 2012. As an executive committee member I was also in charge of overseeing some of the activities of the fest. In the end, the National ICT Fest was a grand success. It afforded me the chance to develop my abilities in fiscal management, organization and my interpersonal relationship skills.

Recently, I have joined the Islamic University of Technology (IUT) as a lecturer. I was highly encouraged by my professors and the Head of the Department of Computer Science and Engineering to become a part of the faculty. Currently, I have taught a course on Visual Programming and have instructed the corresponding lab class. I have also conducted labs on Database Concepts and Programming, Microprocessor and Assembly language, Pattern Recognition and Operating system. I joined IUT so as to gain working experience in teaching and to have ample opportunity to conduct more research before I enroll in a graduate program.

It was in this vein, that I decided to further my career in research and it prompted my interest in the graduate program at Western University. I am aware that the Western University is a top university and that it is one of the best research centers. Computer Vision is the field in which I am interested the most, as this is the field in which I have conducted my Bachelor's thesis and in which I have the most experience in research. I am also interested in Artificial Intelligence and Machine Learning as this field is close related to computer vision.

I am very eager to work under and with some of the finest minds in Computer Science so that I may be able to perform valuable research work and increase the depth of my knowledge. I wish to earn a M.Sc. and then follow this with a career in research. I feel that this graduate program will allow me to achieve my goals. I hope that my background and qualifications are found suitable to enroll into the M.Sc. program in Computer Science at Western University.