

## Statement of Interest

From a young age, I spent countless hours in the virtual gaming world, fascinated by how a computer screen had the ability to record and analyze each pixel, each action, and each decision, transforming a mere entertainment into a virtual universe. This kick started my love for computers. My fondness for technology began with a passion that later turned to be obsession as I pursued my bachelor's degree in computer science from a reputable university in my town, named the National University of Computer and Emerging Sciences. Through hands-on experience and rigorous coursework, I strongly understood programming languages, artificial intelligence, and algorithms. However, growing up in Pakistan, I witnessed first-hand the challenges driven by climate change, deteriorating healthcare system, and paucity of innovation in the private sector. These experiences have motivated me to pursue a master's degree in Systems and Technology MEng- Automation Smart Systems from McMaster University – a center of excellence for technological advancements, hub of research and innovation, and an institution committed to creating a brighter world. Not only will this arm me with the necessary skills and knowledge in my professional career but also help me in addressing critical problems back home in a more sustainable, pragmatic, and a solution-oriented dimension.

My academic and professional experience makes me the perfect candidate for this program. Starting off with my academic journey, I excelled in courses such as Recommender Systems, Artificial Intelligence, and Computer Vision evident by the fact that I secured a place in the Dean's List during my undergraduate degree. Along with this, I constantly kept upgrading my knowledge base by enrolling in online courses such as Udemy course on TensorFlow Development and Complete Web Development. Most importantly, I explored my intrinsic passion for automation and smart systems during my final year project during which I made a classification model to assess fruit quality using real-time monitoring by incorporating machine learning and artificial intelligence. This project got nationwide recognition as it stood 5<sup>th</sup> among 420 participants in the Jazz 5g Hackathon, a national annual competition for state-of-the-art projects. These achievements during my academic career are not just evidence of my diligent efforts, perseverance and commitment but also showcase why I fit well for this graduate program.

My instructors recognized my sincerity, the passion that drives me, and the hard work I constantly demonstrated. This started my first professional experience as I was hired as a Teaching Assistant (TA) for three major courses: Computer Networks, Design Structure and Algorithms, and Digital Logic Design. In addition to this, I worked as an intern in the public healthcare system. During this period, I gathered and analyzed data to optimize vaccine distribution in Karachi to allocate public resources in the most efficient manner by using factors such as population density, infection prone clusters, and supply chain logistics. I believe that my experience of working in a developing country along with my professional experience of working in the public sector will add immense value to the academic discourse while also gaining crucial learnings.

By the end of this degree, I will prepare myself to adeptly apply practical skills tailored to meet industry requirements. I plan to develop my skills, present my concepts and prototypes to my team members and stakeholders, and attain digital manufacturing savvy, which is

essential for a successful career in Industry 4.0. I also intend to use the skills gained from this program to enhance social welfare through green technology developments and technological innovations that are meant for health sectors. This is something very close to my heart. The degree offers forward-looking education that guarantees me future relevant skills necessary for surviving within an ever-changing challenging technological world.

The McMaster Systems and Technology MEng- Automation Smart Systems Graduate Program denotes exemplary attention to the specializations required by employers, especially in the Industry 4.0 era. With the program incorporating courses such as SEP 787 – Machine Learning: Classification Model, SEP 791 – Augmented Reality, Virtual Reality and Mixed Reality, and SEP 720 – Cloud Computing, which allow for an individual to be perfectly equipped with the evolving demands of the Industry 4.0 landscape, there is no better fit than this program.

**Regards,**  
**Abdul Ahad Shaikh**