

## STATEMENT OF PURPOSE

TANVI JAIN

I firmly believe that our ability to see the world from a different perspective than other successful people makes us find solutions to various problems that are increasing in this contemporary world every day. We are currently experiencing the technological and computing revolution that eventually has radical effects on our lives and hypothetically redefines what it means to be human. Because my life has virtually coincided with the rise of the modern computing industry, I can sense that there are still tremendous developments that are yet to come in this field. and I always found computers to be fascinating and chose Computer Science as a major because they will lead the way in the future. The promising career prospects of the field posed as a cherry on top, and supported by my zeal for the subject, I seek a Master's degree in Computer Science from a competent stage such as your University.

Early in my life, I learned from my parents to work hard and be optimistic. They always said, “The problem is not lack of resources or abilities, but the lack of will”. Being from a small town with a radius of 5 miles called Dhar, Madhya Pradesh in India, I had to travel to a city for higher secondary schooling due to a lack of educational resources. In my formative years, my fortitude was strengthened by seeing my parents who raised me into a confident, hardworking woman while never letting their financial position become adversity. As a result, arising from a humble background made me responsible, and strong. I am appreciative of their efforts and have been working hard to achieve everything they wished for.

My academic record has been consistently good. I was the district topper in 10<sup>th</sup> Grade and secured 5<sup>th</sup> position in overall district in 12<sup>th</sup> Grade. For my undergraduate program, I chose Computer Science and Engineering at SRM University, Kattankulathur Campus. A highly regarded institute, its sole focus lies in guiding future engineers to be assets to society. I learned and gained expertise in various facets of computer science and engineering such as Computer Architecture, Data Structures, DBMS, Operating Systems, Machine Learning, Design & Analysis of Algorithms, Compiler Design, and Networking. Gaining programming skills such as C, C++, Java, R, and Python, The deeper I indulged in them, the more I learned and appreciated my love for this field. I was more capable to turn my ideas into real coding and make useful applications too. Excellent teaching methodologies emboldened me towards hosting a goal to contribute to advancing technology and meeting societal needs.

During my undergraduate studies, I constantly attempted to link theoretical knowledge to practical applications through various academic projects in different domains. One of these projects was 'A Smart Stick For Visually Impaired People Using Raspberry Pi, where we designed a prototype system that uses the concepts of Internet Of Things (IoT), Deep Learning with Image Processing techniques to detect and trace the objects. This project investigates methods and procedures to construct an efficient system to assist blinds in their everyday life. In particular, various technologies that can be utilized to build a wearable system are examined. This function highlights the significance and additionally affords the commands to blinds for effective navigation and secure Information with the aid of using incorporating objects/pedestrian in real-time. The result obtained was extremely satisfying, given the condition that the recognition of the target objects was done in a dynamic environment. Input frame of a video sequence detection in a person, chair, and bottle with a confidence level of 95% approximately although the chair is kept far from the module it

detects the object at an accuracy of more than 90%. Working in the domain of AI and Natural Language Processing (NLP) always fascinated me and also inspired me to work on Zira, a personal voice assistant. Draws its inspiration from virtual assistants like Cortana for Windows, and Siri for iOS where users can interact with the assistant through voice commands. The experience of working on this project made me curious and motivated to continue to explore the domain further.

After completing my Bachelor's degree, I accepted the job offer from TCS(Tata Consultancy Services) to work as System Engineer, I joined the development team and worked on a project titled 'TCS' Enterprise Rights Management Solution' (TERMS). As a Developer, I learned and worked on different technologies and tools like Angular, Java, and JavaScript along with working on platforms like AWS during my project tasks. Developed various modules from scratch for TERMS, improved the overall look and feel of various screens and also contributed to defect fixing at various levels of testing. Possessing zeal for computer science, I was proactive about growing my skill set in other ways and completed online certification courses on Azure Fundamentals by Microsoft, Python programming from the UdeMy platform, Web Development from Coursera, and DMBS from NPTEL. So, I believe a Master of Science degree will not only enable me to widen my existing knowledge base but also instil in me the attributes necessary to carry out independent research, practice application-oriented thinking and accumulate the much-required technical knowledge for a scientific career.

There is a lot to learn and explore in the field of Computer Science. I always wanted to use my education for enhancing the lives of not just human beings but nature as a whole. So, I believe a Master of Science degree specializing in Computer Science involving general courses like Data Mining, Artificial Intelligence, and Machine Learning along with an emphasis on Human-Computer Interaction and Sensors & IoT will enable me to widen my existing knowledge source. **Master of Science in Computer Science** at your **University** would better equip me with the requisite knowledge.

Given the university's distinguished reputation, I am confident that a master's degree in Computer Science from your **University** will provide me with numerous opportunities to learn and grow my technical proficiency in the varied areas of computer science. My ultimate ambition in life has always been to contribute to society, and the cutting-edge facilities provided will allow me to experiment more and gain knowledge to contribute to society's well-being. Furthermore, Sharing the classroom with some of the most brilliant minds from around the world would be a humbling experience. The strong alumni network and industry connections provided by the **University** would help me reach people in high places around the world which would help me collaborate with like-minded individuals and well hone my technical skills.

Therefore, I am applying to the Master's Program of your esteemed university, commencing in the Fall of 2023. While I am certain that an elite course such as yours will be a significant challenge and test my limits, I have confidence in my sincerity and dedication. I hope to grow and excel and prove to be a valuable asset and source of pride for your institution in the future.

I sincerely hope that my application is positively received by the admissions board.

Thanks, and Regards,  
Tanvi Jain