Statement of Purpose

Navdeep Singh

Master's in computer science

"University Name"

USA

When I was teen, my brother used to do many things related to Electronics and Electrical like creating a Home Inverter for our home and repairing all sorts of electrical devices at home. I used to help him like cutting the wires and soldering wires to a circuit board. Moreover, I remember when I used to abominate my brother as he reverse engineer all my new toys and add extra connections to make the motors run faster by connecting multiple batteries and do some other kind of customizations like converting normal speakers to Bluetooth by consolidating two different products . Although my brother didn't have any Engineering degree, he showed me how we can customize, reuse and ameliorate the things as per our needs. The interest and zeal to assimilate electronics made me to pursue Bachelor of Technology in Electronics and Communication Engineering at Chandigarh Engineering College, Punjab.

During my under-graduation, I learned about Robotics, Analog, Digital Electronics and various programming languages like Embedded C and C++. I was intrigued by all Electronics subjects but the one's that captivated me the most were linked to coding and controlling the Hardware by user's commands. During college, I plunged into two internships, one was 2 months internship in Robotics where I created my first Robotic car which was controlled using android app and the other was 6 months Industrial Training at HCL where I was enlightened about various Controllers and programming languages like java, html and Embedded C and here I designed "WEB Server Based AUTOMATION using Ethernet Shield" which helps in controlling devices in real time from different locations. Based on my performance and grasp on coding, I got an assistantship in HCL to teach my peers to write and understand the code exhaustively. During the final year, my college conducted programming contest to select top 100 students for ELITE batch of Computer Science in which I got selected based on my outstanding coding skills and desire to learn.

After completing my under-graduation, I joined John Deere, Pune as a Graduate Engineer Trainee in Embedded System. Based on my research skills, I got selected for 6 months Innovation program to ameliorate existing machines and to ferret out innovative and disruptive solutions. During this period, I filed 2 Invention Disclosures in John Deere and received "*WOW*" Award which is given for excellence in performance. I got nominated for "*Budding Talent of the year*" Award which is given for best trainee of the year. I worked with two Software Development teams situated in United States. In first team, I worked as a Senior Software Developer for 2 years and was responsible for automating AUTOSAR stack. In this team I got an opportunity to glean best object-oriented programming practices from veteran programmers and gained profound knowledge of .NET Framework, Design Patterns, SQL, parallel programming and code reusability. In second team, I worked for 2.5 years under the guidance of

Systems Engineering Expert and acquired the knowledge of system engineering and UML modelling. I was delegated as a lead from India for this team and learnt best practices to document the systems and Development tools using MagicDraw Environment. Moreover, my major responsibility in this team was to develop and test applications using C#, WPF, MVVM, ReactUI and Microsoft's testing frameworks. In 2019, I presented an idea based on artificial intelligence and computer vision for tracking Deere offices using mobile app. I had implemented this idea using Unity tool and C#, being neophyte in machine learning and artificial intelligence I tried to reuse existing libraries and solutions for computer vision and for locating the objects at runtime. After getting recognized for this Proof of Concept I got motivated to work in this field by dint of which I was able to file the Invention Disclosure based on Artificial Intelligence which is submitted to United States IP committee of John Deere and is still in discussion phase. This filed Invention further mushroomed my interest in technologies like Machine Learning, Computer vision and Artificial Intelligence. For creating 20 innovative and robust tools, I won "*EUREKA*" Award which is one of the biggest competency awards in Deere.

I am intransigent in finding the unique and groundbreaking innovative solutions and to unravel the problems of farmers which will eventually facilitate us to feed the world's increasing population. At John Deere I have filed 5 Invention Disclosure's that have passed novelty checks by Patent Engineer and are under discussion. Being a part of Deere's innovation program for last 4.5 years, I have observed that technology is about to take major leap forward in Off-Road vehicles. As the technologies like Artificial intelligence and Machine learning are about to become much more intelligent, the demand of highly trained professionals will grow further. So, this is pivotal moment in time for me to pursue master's in computer science. As from beginning I am differentiating myself in many ways, this course will unlock world of opportunities for me and will expose me to the cutting-edge technologies like Machine Learning, Artificial Intelligence and Cyber Security. I would like to work with companies like John Deere, google and Amazon in future.

Today, knowing my competencies and understanding where I want to accomplish, I yearn to study in "COLLEGE NAME" and pursue MS in Computer Science. It will be a pleasure learning from the professors who have excelled as technology leaders and has won many venerable research grants. As the program offered by the Institute would furnish me with an opportunity to acquire advanced-level, high-quality training in the core areas of computer Science. I strongly believe that it will benefit me by helping me foster the skills that will be required to achieve my future goals.

Given my education, experience and passion of learning and innovation, I am a good fit for master's in Computer Science in your prestigious Institute. I have researched the course and feel confident that the coursework and my work experience are a strong match.

Regards,

Navdeep Singh