

Statement of Purpose

My fascination with mathematics traces back to high school. From Calculus to Arithmetic to Algebra, I spent countless hours practicing. I harbored the same alacrity for the subject in college, and it was here that I got acquainted with the multitude of the subject, its utility in the modern-day data revolution, and artificial intelligence. From thereon, I found an immaculate intersection where I was doing what I loved and could indirectly contribute to the all-around advancement of technology. Technological advancements have brought extensive amounts of user data to the internet. My inquisitiveness to unveil all the techniques employed to manipulate and store data remotely has acted as a catalyst to rouse me to discover the most profound mysteries in this domain. Moreover, my academic and professional preferences have been determined by the opportunities they propose for the potential acceleration of my interests and the proliferation of corresponding knowledge and problem-solving skills. This curiosity and my longing for the subject made me choose to pursue a Master in Computer Science from your esteemed university.

Earlier, during my college studies, I was introduced to fundamental programming languages like C, C++, and Java, where I grasped the nuances of each language and realized that one language was an enhancement of the other. To put my theoretical knowledge to use, I worked on a project named "Chatbot for Medical Assistance," which utilizes AI to compute patients' early symptoms and recommend a likely diagnosis. We managed intents with the Dialogflow platform's AI system and integrated external APIs with Node.js. This gave me an idea of the power of computation in leveraging data. Later in my undergraduate studies, I was exposed to an entirely new world of programming and algorithms through courses such as "Data Structures," "Cloud Computing," "Database Management Systems," "Machine Learning," and "Data Mining and Data Warehousing."

My interest in using technology to solve societal problems began in the sixth semester of college when India suffered its first wave of the COVID-19

pandemic. During the early stages of the pandemic, I read a news story about Google researchers working on constructing an AI system competent in identifying the virus. I set out to do something on my own, despite my vague knowledge, and commenced operating on "Detection of COVID-19 Prediction Using X-ray and CT Scans". I used transfer learning to create CNN (Convolutional Neural Network) models such as VGG16 and ResNet 50, as well as optimization techniques like batch normalization and dropout. Despite constraints such as a lack of data and research, the best-performing model accomplished an accuracy of 85 percent. This potential lies at the intersection of AI and the healthcare system. This is an engrossing thing to me, and I shall look forward to employing my computer science acumen to contribute to the field of healthcare.

After reading my blog post about COVID-19 detection using CNN, I was given a position as an AI Content Creator at Jovian.ai. I wrote articles on data science, machine learning, and computer vision projects, tools, and frameworks. As a Machine Learning Trainee intern at Indian Servers, I worked with the Andhra Pradesh Police Department and Indian Servers Pvt. Ltd. to create a complete system for detecting people without masks in crowded places and informing the appropriate authorities. I acquired worthwhile knowledge in the areas of application design, development, and testing. These two internships allowed me to obtain a more profound understanding of the corporate world and to analyze the pertinence of my knowledge.

With an emphatic interest in public service, my teammates and I curated our final year team project on "The Pothole Authority Alerting App," an Android application that uses GPS to classify plain roads or potholes and immediately notify the proper authorities. We made use of a combination of tools and technologies, including Flutter, Tensorflow, Firebase, and APIs. With the assistance of the local municipal authorities, we managed to persuade a group of people to use the app on a recurring basis.

These projects have been a substantial factor in shaping my intellect and my robust willpower. Apart from my professional pursuits, I have consistently believed that everyone should contribute to the overall

development of society. I spent two years actively volunteering for CSI (Computer Society of India), where I met students from all around the country who had the same interests as mine. I participated in the planning of a number of seminars, advertising campaigns, and fundraising events. It is indeed very difficult to put into words the pridefulness you accumulate after contributing a little to society.

I am currently employed as an Associate Application Developer in Accenture India's Public Services branch, where I primarily work on backend development. Through all these jobs and internships, I have met many smart people and have acknowledged my strengths and shortcomings. Thus, to hone my acumen in the field of computer science, I intend to apply for a master's in the computer science program at XX University.

The United States is a country that provides a perfect environment for the overall development of a student. The nation's reputation for prestigious higher education programs is one of the main reasons for choosing to study in the US. Due to small class sizes, highly accredited instructors, and advanced technology and testing capabilities, the best education system is offered. University campuses in the US are like small college towns and encourage you to make friends and socialize, and they have a life of their own.

In my opinion, your university would help me bridge the crucial gap between my academic endeavors and my professional pursuits. The award-winning university's commitment to providing a stimulating and vast experience for its aspirants is evident in the course structure designed to equip students with the knowledge, skills, and expertise needed to research, create, and work with the best minds in the field. After going through the courses and academic structure multiple times, I think I will be able to put myself under the tutelage of the faculty of XX University for the immense knowledge that they possess.

I believe my inquisitiveness and exuberance in the field will keep propelling me to strive for more. Over the years, my self-motivated nature has aided

me in various endeavors, which have shaped me into the person I am. Displaying a commitment to learning, enduring demanding roles and responsibilities, and esteeming the values needed to flourish are a few of the capabilities that I believe will be worthy of securing a place in the program.

I am eager to learn new skills and uplift the standards of my expertise with the highly qualified faculty of your esteemed university. I aim to get employed at top-notch companies for positions like artificial intelligence and machine learning engineer, software developer, chief information security officer, etc. in my home country, and I want to contribute the best of myself. This will be a transcendent opportunity for me to showcase my expertise and magnify my abilities to appear as a computer science professional in the market.

I believe I have aptly depicted my interests in the field of study, and I hope that the admissions committee recognizes the same. I now thank the admissions committee for giving me a chance to submit my statement and hope for a positive response.

Regards

Snehit Vaddi