Statement of Purpose

Since I was in elementary school, I have been fascinated by programming. I learned basic programming in high school. I used to look forward to my computer classes eagerly. It led to my curiosity in how exactly the operating system makes a computer work, or how mobile applications work on devices.

Later, as a computer science undergrad, I was fascinated by reading about innovations like speech-to-text transcription, Server-less computing and modern software development architectures. These innovations have ignited a desire to use data science and software development to contribute my bit towards society. I am keen to harness the true potential of technology and Use it to improve the lives of specially-abed by solving real-time problems. I am excited to apply to your school because of the particular work being done at the **XYZ University**.

I got my first-hand exposure to this revolutionary technology through my minor project titled farmer's agriculture billing system. Creating this project was solely to address farmer's billing issues, but at the time I didn't have the skills to do it. I started researching how to do it. Since I already knew how to program in c, so I used that knowledge to start the project. After extensive research, I came across projects which offered wonderful insights about allocation and memory management, architecture and the overall concepts that drive programming. With these, I was able to create my first desktop application which can calculate farmers bills. After a while, I got acquainted with the limitations of my approach. My quest for a resolution familiarized me with modern web technologies.

To explore the realm, I enrolled in a course by Johns Hopkins University on Coursera. That's when I came across a project to create data visualization with modern web application. I finally got my answer. I changed approach by using modern web application technology such as JavaScript. After that, I was able to successfully write my open-source library on GitHub to make farmer's agriculture billing applications available for techies looking to build on this concept. With this project, I picked up the fundamentals of data visualization, application architecture, and web application in general. The icing on the cake was bagging the best project award.

Besides, ReactJS as front-end and web3 JavaScript library has caught my fancy. I developed an interest in the domain after watching a TED Talks on web development and its applications. Soon, I signed up for a course on fundamentals of ReactJS from Udemy, These courses offered an overview of basic underlying working of ReactJS. I created a real world responsive portfolio website with email functionality using React js, Bootstrap, Rxjs and NodeJS.

Given my voracious appetite for learning, I intend to deepen my expertise in the thriving artificial intelligence domain. In this regard, graduate studies constitute the ideal path forward. Hence, I seek admission to the MS in Computer Science at Arizona State University. After graduate studies, I would like to work in the research and development department of top IT companies across the globe. My long-term goal is to establish my start-up in India where I can provide intelligent solutions for day-to-day problems and to ease the lives of the differently-abled.

Speaking of my academic journey, I loved to delegate monotonous tasks to machines. This passion started when as a twelve-year-old, I created a simple water tank overflow alarm. Later, I went on to create working models of staircase trolley and propeller car for annual science exhibitions. Besides, I loved playing games on the computer with Counter-Strike being my favorite one. Unlike my peers who played games for entertainment, I used to play to understand how this machine works. My evolving fascination with the man-made marvel and its myriad applications propelled me towards a bachelor's in information technology. Good scores got me admission to a sought-after college in central India.

The extensive set of courses at Chameli Devi Group of Institutions sculpted a strong foothold of software and hardware. The most significant modules were Java, Computer Networking, Distributed Computing, Information Security, Data Structures, Artificial Intelligence, and Web Development. A gamut of projects and internships equipped me with the requisite hands-on experience of these theoretical lessons.

An enriching experience at college was taking part in a two-day hackathon. I built a faculty scheduling web app that won the second position. Our college is using the same application for staff management. This hackathon taught me how to write a client-server application in Python with the Django framework. Moreover, I was a part of the college's robotics and coding club, where we self-learned how to program a microcontroller using Arduino. I created a line follower and obstacle detector as well as conducted a workshop where I taught students how to use Arduino.

I pursued an Internship at IIT Indore in the astronomy department. I created a web app in Python to display the incoming data from a radio telescope in the form of charts. Since I had no idea about Python, I picked up its syntax in three days and started working on the project. As the data set was humongous, I learned the concepts of Ajax requests using which I built the web app with on-demand data. My other internship at Hidden Brains Infotech involved spearheading a team of five novice programmers. We aimed to create a production-level multiplayer space wars game with a group chat feature as well. I won the best intern award courtesy my out-of-the-box thinking and leadership skills.

My performance got a full-time job offer as a web developer at Hidden Beans in a different city. As my family was going through a financial crunch, I spoke to my head of department to let me do me a full-time job in my senior year. He agreed. The only condition was that I had to study on my own. I did a full-time job Monday to Saturday and studied on Sundays. In this way, I worked to complete my education.

Since then, I have worked on numerous projects. I have created a MATLAB script to predict the handwritten alphabet and trained a deep neural network with sigmoid activation function and gradient descent to reduce errors. I worked on a Code Automation project which involved creating a Python script to convert requirement documents directly to javascript code to create a/b tests. We used a natural language process to extract information from requirement documents and created a code engine to produce javascript code according to requirements. Another project, Netson project, dealt with working on a POC for a client to create a decentralized wireless network using ethereum blockchain. I have created a decentralized app with solidity to create a smart contract and Reactjs as front-end register data usage on the blockchain, which maintains immutability.

Additionally, I worked on another project for United Airlines. We discovered that we were using too many network calls to collect user data. My supervisor and I came up with an idea to implement a library to reduce those calls by 95 percent. Our client appreciated the efforts. Besides, I worked for a project at Harvard Business School for an online magazine. The deadlines were short, and the team of that project was working hard to meet them. The project was not working on the internet explorer. With the help of (mention technologies), I tweaked the project so that I would run smoothly on the browser in just five days. Both assignments got me the star of the month awards.

Moving forward, I am eager to pursue the MS in Computer Science program at Arizona State University. ASU bears a stellar global reputation for academic excellence, making it a popular choice among computer science graduates. After all, ASU offers access to meticulously devised coursework, tutelage of expert faculty, and precision-engineered labs. I would love to be a part of (professor's name) research on (mention), a topic that aligns with my interests.

I look forward to a positive response from the admissions committee. Indeed, it would be a privilege to get my master's degree from such a prestigious institute.