

Essay

My interest in the field of computer science grew while working on my projects of undergraduate degree where we created a useful analytical dashboard using raw chunks of data. I was ecstatic when I first experienced the transformation of meaningless data into a significant, visually appealing dashboard. I feel excited about the wide application of the field nowadays, especially in artificial intelligence, machine learning, data analytics, software engineering and many more. Having a genuine passion for learning and keen interest in keeping up with the pace of evolution in the IT sector, I, after working for over one year in the industry, wish to explore the field in-depth by pursuing a Master of Science in Computer Science.

On the academic front, I have completed my undergraduate degree in Bachelor of Technology (Computer Science and Engineering) at Lovely Professional University where coursework provided me with a solid foundation in Programming concepts, Languages (C++, Java, Python), Data Structures and Algorithms, Database Management System, Machine Learning, and Software Development methodologies. I took Machine Learning as my Engineering Minor from my fifth semester. Outside of the standard coursework, I actively took part in Full stack Web Development workshops. During college, I had an opportunity to work as an intern in Salesforce development firm where I gained practical knowledge on creating responsive applications using Workflows, Apex Programming language, Lightning Web Components, Triggers, Validation rules, Reports & Dashboards and many more. By the end of the internship, I was able to develop a 'Institute Management System' application that allowed students to efficiently apply for the universities and if they got admit, the application will send an automatic email to the students. In addition to, they can check timetables and course information and notes.

During my time in college, I was part of a team where we developed 'Hospital Management System', a helpful application for the patients. It helps them to check the doctor's availability, doctors' details, and applying for appointment. This project helped me to understand workflow, design and development of applications and gave me in depth knowledge and practical experience on Java. In my fourth semester, we created a 'Book Recommendation System' which allows users to get recommendations based on their interests and top ratings given by the people whose interests are like the user. We used Data Science and Machine Learning libraries like NumPy, Pandas, SciPy, Scikit learn, Matplotlib, Seaborn and many more for this project. This opportunity allowed me to broaden my horizon and study about Data Science and Machine Learning concepts. And in my second semester, we developed 'University management system' a web application which helps students to communicate with the university easily. They can check their check marks and timetable, can apply for the improvements, or reappear exams, can check the university announcements, and many more. We used HTML, CSS, Bootstrap and JavaScript for this project. While working on these projects my passion for computer science grew and I was fascinated by the sheer power of technology making our lives easier.

After completing my undergraduate degree, I joined a reputed Indian IT firm, Cognizant Technology Solutions as a Salesforce developer. Here, I had opportunities to developing and customizing Salesforce applications, writing Apex code and implementing Visualforce pages,

configuring, and maintaining Salesforce objects, workflows, and validation rules, collaborating with client and stakeholders to gather requirements and provide technical solutions, testing and debugging salesforce applications, participating in code reviews and ensuring adherence to best practices, and providing support and resolving issue related to salesforce implementation. My consistent and conscious efforts helped me get promoted from Programmer Analyst Trainee to Programmer Analyst in a very short period. This experience helped me gain valuable insights and understanding of the field and industry practices.

Working in the industry for almost one year, I am aware of the dynamic nature of the computer science field and that's why I am eager to acquire advanced knowledge on data structure and algorithms, data analytics, machine learning, data visualization, and software engineering which will help me achieve my goals. I believe a master's degree will allow me to stimulate my intellectual curiosity and enhance my knowledge and skill to excel in the field of Computer Science.

Upon completion of the master's program, I intend to work for a respected firm where I can apply my knowledge and skills to develop innovative solutions that can augment efficiency and improve user experiences. Furthermore, I aspire to transition into leadership roles where I can shape software development initiatives, guide other team-mates, and contribute to strategic decision making. In the longer term, I want to contribute to the advancement of the field in my home country by providing effective solutions for real-world problems faced by society.

After going through several universities in the United States, I found Texas Tech University ideal for me. Its comprehensive curriculum, student-friendly programs, modern facilities, distinguished faculty, and vibrant research facility has impressed me the most. Texas tech offers diverse learning opportunities on courses like Programming with R for Data Analysis and Machine Learning, Advanced Database Management Systems and many more which are aligned with my academic as well as professional goals. I am particularly eager to learn from Professor Tommy Dang on topics like Big Data Visualization and Visual Analytics which will help me become a successful data analyst. Moreover, the practical approach of study will provide me with exposure to a real time work environment.

Apart from academia, I have always been an active member of extracurricular activities. I have acted as event co-head where I have successfully organized and managed a college fest. I have also been an active member in my university clubs which are very interactive, communicational, and fun. All this helped me hone my communication, creativity, leadership, and crisis management skills.

I am confident that Master of Science in Computer Science at Texas Tech University will equip me with skills to excel in the rapidly evolving field of computer science. I look forward to the opportunity of joining the esteemed academic community at your university.