

The rapidly evolving and progressive field of Computer Science has enchanted me from the beginning, from its myriad of applications in various sectors and its futuristic innovations in the domains of Machine Learning and Artificial Intelligence. Most operations are currently done online, and I believe that a strong understanding of algorithms, programming languages, and databases is extremely essential to contribute usefully to this field. My undergraduate education has helped stoke my passion for the subject and has also made me more responsible and focused on my goals. Hence, I now intend to move ahead in my career path by pursuing a rewarding postgraduate program in Computer Science, so that I can explore new related avenues of this field and build a stronghold in this area.

Since childhood, I have been fascinated by computers and often wondered about its internal functioning mechanisms and its unlimited possibilities in different fields such as education, healthcare, business, and manufacturing facilities. This interest and drive motivated me to pursue my undergraduate studies in Computer Science. During this period, I particularly enjoyed learning about Data Structures and Computer Networks, and honed my practical skills through my laboratory courses in Database Applications, Networks, and Web Programming. I also gained in-depth skills in Unix system programming and the Java programming language. I have also received additional training in Java during my undergraduate period which proved extremely helpful for my subsequent projects.

In order to apply my newly acquired knowledge and skills and to understand the type of skills needed for real world projects, I decided to undertake my final year project on A Lightweight Encryption Scheme for Network-Coded Mobile Ad Hoc Networks. Here, the objective was to provide confidentiality for network-coded MANETs to encrypt the packet payload using symmetric-key encryption algorithms. The currently existing solutions have large overhead with respect to both computation and space, and may not be totally suited for MANETs. Hence, I proposed a design for a new encryption scheme that could fully exploit the security property of network coding. The lightweight encryption scheme that I proposed, known as P-Coding, can effectively fight against eavesdroppers in network-coded MANETs by randomly mixing symbols of each coded packet (packet prefixed with its coding vector) using permutation encryption to make it hard for eavesdroppers to locate coding vectors for packet decoding. I used the Java programming language to program my system and successfully tested and validated the behavior of my proposed algorithm. This project gave me tremendous knowledge about security measures and encryption processes, and I became adept in using Java to perform programming operations for research projects. Based on this work, I got the opportunity to give a technical presentation on "Energy Efficient Image Transmission in Wireless Multimedia Sensor Networks".

Soon after completing my undergraduate studies, I decided to start working as I wanted to get an industry experience of working in the software sector. Hence, I started off my career as an Android Application Developer at MyDeals247, where I developed an advertising platform application. This experience helped me become proficient in Android development and also helped me learn how to work effectively in a team. Due to relocation of this office, I had to leave my job after a year, and then I started working at Gyanmatrix Technologies, which handled projects for NewsUK and Financial Times of India. This was, I feel, a very good decision as I got the opportunity to learn Swift programming for a social media application where I developed the iOS from scratch for a product known as "SoYou". After this, I started working on the development of the Android application, and then forwarded both applications to stores. For this project, I was awarded Best Employee of the Month.

From here, I moved on to the company, Keyfalcon Technologies, where I worked on an application known as Resq Button that used a beacon support to ask for help. After this, I worked on the backend of another application known as Hejje that is widely used in national parks across India. For this project, I used the technologies Node.JS and MongoDB, and based on my performance I was promoted to the position of team leader. I am currently working on a reporting application known as I2 on both iOS and Android platforms, for which I have already set up AWS instance and hosting. Another project that is also ongoing at the moment is using WebRTC in React Native to install a video calling feature for medical services. All my projects at my three workplaces have given me a chance to learn all the latest tools and technologies used for different types of projects. I have become adept in Android and iOS development of different types of applications and learnt several features and technicalities in the process.

Across my different jobs, I have learnt a number of new technologies and understood market trends and industry demands. However, there are a number of things that I am yet to learn and explore and I hope a Masters in Computer Science will help me acquire deeper insights about this field. Currently, what makes me unique is that I can deliver end-to-end service as a Full Stack Mobile Developer from a product perspective, and I wish to strengthen my knowledge and presence in this area. After completing my postgraduate education, I intend to get a job in a forward-moving company with solid performance and future projections, where I can effectively showcase my talents and contribute to the growth and development of the company. Eventually, I see myself working as a Software Architect moving towards achieving my best in the industry.

In order to fulfill my career aspirations, I intend to pursue a postgraduate program in Computer Science from your University. I particularly intend to concentrate on programming, coding, and software development, and hone my skills in this area. I am aware that your University is one of the forerunners in producing skilled professionals in Computer Science every year, and I long to be a part of this team of individuals who are focused on achieving excellence in their careers. Your advanced research facilities will serve as a perfect platform for me to undertake several research projects which will help me build a strong and diverse skill set. Being guided by exceptionally skilled faculty at your premises will enable me to acquire a broader perspective for my future and a better sense of research taking place globally.

Given my inherent passion for the field of Computer Science and my extensive experience in application development, I now intend to acquire an advanced level of knowledge and skills in my field of interest through your postgraduate program.