The growth of technology in recent decades has come at a meteoric pace. Innovation and excitement pervade the present landscape in the field of Computer Science. As a millennial growing up in tandem with the evolution of computers and technology, I have had a devout fascination towards Computers. In conjunction with my natural propensity for Maths and Statistics, I was able to translate this childlike interest into a competent academic aptitude and technical expertise. My experience of studying and working in the domain of Information Technology has steered me towards the decision to pursue higher education in the discipline. Motivated by a desire to explore the depths of knowledge and utilize my scholastic faculty to create something meaningful, I am applying for a Masters’ degree in Computer Science.

Given my proclivity for computers and mathematics, I was excited to expand my academic horizon in the field with an undergraduate programme in Computer Science Engineering. I still remember the sense of amazement and intrigue I felt when I was first introduced to the various applications of Computer Science in Medical Imaging, Inter-Planetary Telescopic Studies, Designing High Precision Appliances, Quantum Computing, and more. The curriculum allowed me to hone my mathematical aptitude while simultaneously driving me towards my optimum potential. Several foundational subjects such as Fundamentals of Programming, Object-Oriented Programming, Data Structures & Algorithms and Design and Analysis of Algorithms equipped me with a sound knowledge of the Computer Programming and greatly aided in developing my coding skills. Another set of courses including Information Retrieval, Machine Learning, Internet of Things and Big Data Analytics offered me a more nuanced understanding of the present and future technological infrastructure. These courses helped in building my conceptual intelligence as well as analytical thinking capacity. The curriculum focused on holistic growth and included subjects like Joy of Engineering, Innovation and Entrepreneurship, Understanding Business, and Selling Negotiation & Persuading Skills in addition to the core subjects.

My time as an undergraduate student has judiciously shaped my academic disposition alongside strengthening my professional profile. The projects I worked on in these four years have catalyzed my expertise in my areas of interest. The very first project that I created was a computer game called Maziac under the Joy of Engineering course. It was an enriching experience and taught me the skill of working in a team of people with diverse perspectives. I engineered database software for a Student Information Management System using JAVA and MySQL. Another one of my projects was a Tour Guide Android Application aimed at creating an interactive network of tourists, guides, and tour places. I deployed tools like Java, SQLite and XML through Android Studio to develop the app. I worked on a project for “Segmenting Handwritten Document Image Binarization” intended to recover damaged handwritten documents due to exposure to oil, water, or natural decay. Based on Otsu’s method, the system used image processing mechanisms to improve the quality of the document.

My work on LiFi Hotspots has earned me a lot of praise. Research on modes on communication incited a curiosity about the concept of using light as a means of communicating between gadgets. Working on this intrigue, I built these LiFi hotspots on data transmission networks which use light as the medium of carrying information. Over the course of this project, I learned about the functioning of microcontrollers, the ways to asynchronously transmit data/media over the network and acquired a general understanding of how communication networks and protocols work. Concomitantly, I worked on “Appliance Automation Using LiFi with MQTT in Hybrid Star & Tree Network Setup”. It was oriented towards the idea of alleviating the limitations posed by other wireless communication technologies in the context of the proficient use of IoT. This project served as a gateway to several subdomains like Microprocessors Based System Design, Internet of things and Machine Learning. My research paper on this project was also published. My thesis project on a “Personalized Diet Plan Recommendation System” also attests my skills in the domain of Computer Science. To make a simple, sustainable, and useful project, we decided to work on a system that breaks the conventional ideas vis-à-vis diet and promotes health-conscious dietary habits among individuals. We created an ontological database of nutritious foods that are specifically designed to meet the needs of certain individuals based on their demographic parameters, disease profile and lifestyle. We utilized Dr Wallach’s study to evaluate the nutrient deficiencies for several diseases and designed a Dietary Recommend Intakes (DRIs) database. I deployed several Machine Learning algorithms including Regression Analysis, K-Means Clustering, and Multi-labelled Classification to create a content-based recommendation system. The project was an insightful learning opportunity.

Driven by the aspiration to continue my learning streak beyond the college schedule, I joined IQuadra Information Technologies as a Web Development intern. My duties involved developing and testing a web portal for employee recruitment using various software development technologies. This work offered me a comprehensive understanding of software development right from scratch. The internship also included multiple training on technologies like HTML, CSS and Bootstrap for frontend, Angular JS for Structural framework, PHP for scripting, and MySql for the database. To the credit of my skill set, I was offered an internship for the role of Trainee Data Analyst at Ernst and Young. In addition to its reputation as one of India’s Big Four companies, my motivation to join EY was the unique blend of software development and data analytics in my job profile. I developed, tested and deployed Machine Learning models, REST APIs, NLP based Text mining solutions alongside improving the efficiency of text mining algorithms using Machine Learning techniques and automated tasks. Deadline management emerged as a primary challenge during this work and consequently, I learned to effectively manage my time estimation for every task. Additionally, I attended workshops on Data Extraction, Transformation and Loading and learnt about various tools like ALTERYX used to manipulate data and PowerBI to visualize it. Following this internship, I was given a full-time role at the company and worked on a Synergy Bench-marking project and Strategic Planning Optimization API. Over the course of my work as an Analyst, I have perceived greater depths of Data Analytics and its instrumental applications, particularly in the business domain.

My work at EY GDS has offered me a realization of the skills I would require to advance my career trajectory in the field of Data Science. I have a substantial understanding of the potential of data to create a better future. My objectives for this Masters’ degree are to acquire hands-on experience in the domain and devote myself to extensive research. I wish to get involved in internships and practical work to hone my technical abilities. In the long run, I aim to use my domain knowledge and ideate solutions for a specific problem pertaining to the global climate crisis.

I believe your university would be the perfect stepping stone for building my career and fulfilling these goals. An opportunity to experience the academic milieu at your institution would help me maximize my potential.