**STATEMENT OF PURPOSE**

Electrical and Computer Engineering is the heart of the most current technological breakthroughs. Any device with an energy or IT component is derived from ECE knowledge. Right from providing accurate medical diagnoses to exploring distant planets, ECE plays a crucial role. This dependency on ECE motivated me to pick this department. Since childhood, I always had the urge to know what was science behind the robotic toys and gadgets and how it worked. The mysteries amazed me and my romance with technology grew stronger day by day. My strong inclination towards Mathematics and Science made me choose engineering ,but later I realized that what I have learnt is just a few drops in an enormous ocean of knowledge. My decision to pursue Master’s is a natural consequence of my desire to gain as much knowledge as possible in my field of interest and help myself to be able to achieve and put my wildest dream to life.

I pursued Bachelors of Engineering with a specialization in Electronics and Communication Engineering from UVCE, Bengaluru, and studied subjects like Analog Electronics, Microprocessors, Digital Systems Design, Digital Signal Processing, VLSI, Analog and Digital Communication and Antenna which gave me an immense theoretical knowledge. The corresponding practical classes have equipped me with abundant practical experience. I consistently maintained a First Class with Distinction in almost all the semesters. My success motivated me to keep abreast of the latest developments in technology and thereby, I attended various seminars and workshops such as Sixth Sense, an Open day at IISc(Bangalore) and IOT workshop conducted by BITES. I have also attended a seminar on 5G conducted by Nokia as well as training camp on Sixth Sense Technology, the wearable gestural interface that augments the physical world, conducted by Technophilia Systems in 2015. These made me realize extended applications in this field.

I have presented many papers such as Channel Modelling of Underwater Acoustic Communication, Vehicle Detection using Simplified Fast R-CNN, Audio Spotlight, and Image Fast Template Matching Algorithm Based on Projection and Sequential Similarity Detecting on the Performance of AOA Estimation Algorithms in Cognitive Radio Networks. I have done many projects throughout my engineering, few of them are Intelligent Driver Assistance, Gear Display System in Bikes, Conversion of Non-touch screen to Touch screen using Wearable Gestural Interface, Image Detection and Alerting. For each and every project, I chose to work on a new technology and that was how I improved my skill set to work on multiple projects which gave me a wide knowledge on the real-time problems. I have participated in numerous trainings and I have taken courses on IoT, Java, Cadence and Python programming.

I have presented five seminars and participated in six coding challenges, technology games and Hackathons wherein three of them were conducted by the CS department, one by the ECE department.I have attended coding challenges conducted by Technophilia and e-Yantra which was conducted by IIT-Bombay and a hackathon conducted by AWS. Though I have worked on many projects, one of my favourites is the Geofence creation for child monitoring whose main goal was to enable the parent to create/draw a fence on the map and help the parent to activate and monitor the kid’s location in real-time and would give an alert if the kid is outside the location. I worked on the front end, database creation, and real-time monitoring of the system (back-end).

In order to garner real life experience, I joined Adisys(R&D)Private Limited and worked on Real-Time Object Detection with Deep Learning from October 2017 to March 2018. As a part of a 8-membered team, we had to train our own model Aster RCNN for detecting the vehicle density on the road, adjust the timer to change the traffic signal accordingly, thereby mitigating the traffic woes. It was through this project that I learnt how deep-learning works from end-to-end. I also wrote algorithms to help the system detect the objects in the ROI. This project was one of the key elements of the Karnataka Government Pilot project. The release of the project is currently under consideration. Having worked on this, I presented a paper on ‘Vehicle Detection using Simplified Fast R-CNN’ and elucidated about the training and testing of the given model, thereby reducing the time taken by the system.

I am currently working at SASKEN Technologies Pvt. Ltd., a company that provides Product Engineering and Digital Transformation services. As a Full Stack Developer I am currently working on a video app using Vidyo API where more than 16 people will be in conversation which is more or like a Skype platform. While working on these, I was keen to learn latest technologies and work on such innovative digital products. I always had a dream to complete my graduate program, I feel that this is the right time for my higher studies. Hence, I am applying for the MS course at your esteemed university. Post MS, I want to work as Software Team Lead in companies such as Google India, Microsoft, and work on the technology like ‘Computer Vision’. In a long run, I want to become an entrepreneur and invent AI enabled products.

The University at Buffalo is ranked one of the best in terms of research and the courses it offers. The research work that is happening at the university would enable me to quench the thirst for knowledge in a more easy way. The Department of Electrical Engineering offers an extensive researches in Masters in Signals,Communications and Networking specialization which includes researches such as Underwater acoustic communications ,Algorithmic and combinatorial aspects of information in communication, management, storage and Magnetic induction-based wireless communication and networking in RF-challenged environment. I would like to get mentored by.Prof. Konstantinos Slavakis. I have studied his research “Feasible point pursuit for non-convex QCQPs: Algorithms and signal processing applications" which is aligned with my interest. I am impressed by the work and achievement of Prof Michael Langbergas and would love to work under him. I am intrigued to find out other facilities like research laboratory, teaching labs and lecture halls would be helpful in achieving my dreams.

My immediate goals happen to work for an organization of international repute in a commendable role.This will not only help me apply the knowledge I have accrued but also help me get a much more globalised perspective. Professional recognition and fame though not of paramount importance to me is something which I feel would be a logical fall out to. My long-term career objective is to leave a legacy that will live on after me.“It is not how many years one has lived but how one has lived” has always been the guiding philosophy of my life. Life for me does not merely exist for the pursuit of one’s own happiness, but a never ending mission to make a difference to the lives of multitudes.