**STATEMENT OF PURPOSE**

Fascinated with the gadgets since my formative years, I was always interested in the applications of Electronics Engineering. Through my research I have come to know about its applications in the field of medical diagnoses as well as at distant planets and orbits, and since then I have looked forward to garnering more knowledge in this subject. My strong inclination towards Mathematics and Science coupled with my conviction to study Electronics, made me choose Electronics and Communications Engineering for my undergraduate studies.

In mmyy, I pursued Bachelors of Engineering with a specialization in Electronics and Communication Engineering from Government Sri Krishnarajendra Silver Jubilee Technological Institute (GSKSJTI), Bengaluru, and studied subjects such as Analog Electronics, Microprocessors, Digital Systems Design, Digital Signal Processing, VLSI, Analog and Digital Communication and Antenna. 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 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 the extended application of this field.

These motivated me to present many papers such as ‘Channel Modelling of Underwater Acoustic Communication’ in mmyy, ‘Vehicle Detection using Simplified Fast R-CNN’ in mmyy, ‘Audio Spotlight’ in mmyy, ‘Image Fast Template Matching Algorithm Based on Projection and Sequential Similarity Detecting on the Performance of AOA Estimation Algorithms in Cognitive Radio Networks’ in mmyy.

Likewise, I have worked on a number of projects such as ‘Intelligent Driver Assistance’, ‘Gear Display System in Bikes’, ‘Conversion of the Non-touch screen to touch screen using Wearable Gestural Interface’ and ‘Image Detection and Alerting’. For each and every project, I chose a new technology and garnered a wide range of knowledge about real-time problems.One of these was the project on ‘Image Detection and Alerting’ which I worked upon in October 2017. Having taken the picture of a moulding machine, I enhanced its pictures using …..and got a high number of disturbances. The following step was to remove the unnecessary noise in the image and process these to check if any material was stuck. Thereby having identified the problem, it was easier to detect and communicate the actual issue to the management and thereby, arranging a fix. All these were done in the real time using video streaming protocols.

My final year project titled ‘Geofence Creation for Child Monitoring’ was to ensure the safety of the children so that they cannot go beyond the specified area. In order to enable this, parents were required to create/draw a fence on the Google map. This monitored the kid’s location and alerted parents in case the child went outside the area. I worked on the front end, database creation, and real-time monitoring of the system (back-end) for this.

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 learned how deep-learning works from end-to-end. I also wrote algorithms to help the system and 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.

Moving forward, I joined SASKEN Technologies Private Limited in mmyy which provides Product Engineering and Digital Transformation Services. As the Full Stack Developer I am currently working on a video app using vidyo api where more than 16 people will be conversing using a skype-like platform. While working on these, I was motivated to learn more technologies and work on similar such innovative digital products. Having always cherished 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 the long term, I want to become an entrepreneur and invent AI enabled products.

The University at Buffalo offers a comprehensive course and offers subjects such as [Signals, Communications and Networking](http://engineering.buffalo.edu/ee/research/areas/signals.html) as specializations. I am also looking forward to work on researches such as ‘Underwater Acoustic Communications’, ‘Algorithmic and Combinatorial Aspects of Information in Communication, Management, and Storage’ and ‘Magnetic Induction-based Wireless Communication and Networking in RF-challenged environments’. Having studied Prof. Konstantinos Slavakis’s project ‘Feasible Point Pursuit for non-convex QCQPs: Algorithms and Signal Processing Applications’, I look forward to studying under his mentorship. I am also looking forward to studying under Prof Michael Langbergas because his publication ‘Generalized Gray Codes for Local Rank Modulatio’ is intriguing. If given a chance, I would like to play football for UB Bulls.

Hence, I aver that my talent will be utilized to its optimal best if I have an opportunity to be a part of the intellectually stimulating environment of your university. I shall persistently strive to make your institution proud.