**STATEMENT OF PURPOSE**

Praveen Kumar, I am a final year student of Computer Science & Engineering with Honors in Computer Vision at the International Institute of Information Technology (IIIT), Hyderabad, and I aspire to pursue MS in Computer Science and Engineering.

**Inspiration:**

At high school, a course in computers was a part of the curriculum. The course impressed upon me the significance and utility of the computer to the extent that I decided to major in Computer Science. This decision taken, I started looking for an institute tailor-made for my ambitions and desires. Then, I heard of the IIIT - Hyderabad, a pioneer institute, with excellent infrastructure, labs and faculty that laid emphasis on fundamental concepts rather than learning by rote; an environment conducive for fulfilling my dreams.

This institute is a class apart from the other million institutes and has a major advantage in being an industry driven institution, Software giants like IBM, Oracle, Motorola, Cisco, SignalTree (formerly Metamor), Satyam Computers and several others came together for the first time in India to establish this one-of-a-kind university. After joining the institute, my interest in computer science has amplified by many degrees.

**Motivation for Graduate Studies in Computer Vision:**

During the course of my graduation, I learnt of the many facets of computer science and their applications. Once a strong foundation was laid, I was introduced to the various streams that formed a part of this vast subject. Of all the streams, Computer Vision excited me the most since I found it to be the closest to everyday life. Graphics that made the impossible possible in movies, the mystery behind three-dimensional games, image enhancement that created wonders – they all evoked the creative side of me and challenged me as a programmer and a designer.

**The Rigorous March**

Thanks to the exhaustive curriculum of our institute, I have done several projects over the span of four years. A OMR Data Extractor that extracts data from scanned images finds application in correction of multiple-choice examinations. This project is currently being used in our institute for feedback evaluation and is a cross-platform application.

A Shape-from-Shading system implements three of the popular SFS methods and involves estimation of the light source and recovery of 3D information about a scene using the shading information in the image. As a student selected for the Honors’ program, I did a project in JPEG Image Processing in the compressed domain. This project implements all the standard image processing operations like LPF, transformations, etc. in the compressed format itself.

My final project deals with Video Segmentation and Processing in the compressed domain. This is an infant research-oriented system that is aimed to be released under GPL/GNU Linux. In this project, we are faced with the difficult task of carrying out operations with minimal and haphazard data. In addition, I have also implemented a network sniffer for Windows 2000 and above. It captures the packets passing through the LAN and stores them. This system is currently being used by Motorola for monitoring the network traffic.

Under the able guidance of Dr. PJ Narayanan, internationally reputed professor in the field of Computer Vision, I have learnt not only the intricacies of my area of interest, but also the approach to problem solving and, more importantly, the spirit to tackle challenges boldly and uniquely.

All this and also the competent environment prevalent in my institute along with the research work and the projects done by the faculty motivated me to pursue higher studies in computer science.

**Goals:**

With Computer Science & Engineering developing fast and throwing open its frontiers to budding, adventurous students, providing novel and more challenging vistas in fields galore. While I may not be the best judge of my qualifications to undertake Graduate Studies, I am certainly conscious of my strong motivation and desire towards developing my technical knowledge in both breadth and depth.

The opportunity to pursue graduate studies at the Syracuse University will enable me to achieve this objective. I will have an opportunity to work both independently as well as in co-operation with people from diverse cultural backgrounds. By the end of the program, I expect to have entered an area of specialized research and contributed significantly towards it. I am confident of performing well at Syracuse University.

My interests are mainly in the fields of Computer Vision, multimedia and Graphics. Having been exposed to these interesting subjects, I am keen to take up more advanced courses in this and related areas. I feel that your university, with distinguished faculty and excellent facilities, is the ideal solution to all my aspirations and goals.