

STATEMENT OF PURPOSE

It is after a good deal of self-evaluation that I have decided to pursue graduate studies in Computer Science leading to a doctorate. This decision followed naturally after carefully considering my academic background, the areas of my interest, and my ultimate professional ambition, which is to pursue a research career, either as a teaching faculty member, or in an R & D department of the industry.

My undergraduate education at IIT Bombay has provided me with a strong and comprehensive background in Computer Science. The curriculum included all the basic courses such as Data Structures and Algorithms, Discrete Structures, Computer Organization and Design, Systems Programming, Theory of Computation, etc.

I had always been fascinated by the field of Artificial Intelligence, which is why I chose the topic of "Human and Artificial Intelligence" for my junior thesis. The literature survey that this entailed exposed me to the fundamental concepts, as also the research work in progress, in the various domains of Artificial Intelligence. I concentrated on issues involved in Natural Language Processing and Knowledge Representation.

My B. Tech. project (senior thesis) is "Word Recognition, Spell Checking and Correction using ART-based neural networks". We are investigating the use of neural networks, configured under the Adaptive Resonance Theory paradigm, for the task of detecting spelling mistakes in English text and generating good suggestions for incorrectly spelled words. This guided independent work has given me a good understanding of the theoretical, experimental and computational skills required in Computer Science.

I have been a teaching assistant for the introductory course "Computer Programming and Utilization" conducted by Prof. R.D. Kumar of the Computer Science department. I have also helped in organizing, and given a lecture on the "VI" editor, during the UNIX workshop conducted by the Computer Science and Engineering Association of our Department.

There are two reasons why I believe that graduate study in a reputed department, such as yours, is important for a person aspiring for a research career. Firstly, working for a thesis under the guidance of an expert whose work can serve as a model is the most effective method of transforming a student into a largely independent researcher making significant original contributions. Secondly, the emphasis of graduate study on intensive and independent study of a specialized area is an ideal way of making a student capable of reaching the frontiers of knowledge in a subfield quickly and keeping abreast of the latest developments.

I feel that with its comprehensive facilities and competent faculty

doing quality research work in the field of Artificial Intelligence will be the ideal place for me to pursue graduate studies. The working atmosphere of a vigorously active department will be helpful in motivating me towards excellence.

In short, I believe that a good graduate program is an essential step for realising my professional ambition of becoming a competent researcher. I also believe that I possess the motivation, intellectual ability and preparation to do justice to a demanding graduate program. My excellent undergraduate record, and my high GRE scores are testimony to that.

I, therefore, look forward to joining your department as a graduate student.