

Personal Statement

My early fascination for computers (since high school), combined with a strong liking for analytical subjects inspired me to seek admission to one of the best and most competitive Computer Science undergraduate programs in India — the B.Tech program in IIT Bombay. I was successful in this endeavour, being ranked 113th among around 100,000 students in the entrance exams to the IITs. In IIT, a very strong curriculum, introduced me to a wide range of subjects in Computer Science, with a strong emphasis on theoretical fundamentals. I have always believed that a subject is understood better when one actually sees an abstract theory being realized by a practical system. The various demanding laboratory courses and projects in the B.Tech program at IIT, have provided me with a better understanding of Computer Science. This belief has led to my growing interest in computer systems, and I have consistently performed well in my laboratory courses. I have also, as part of a campus wide systems support group, been involved in compiling and installing various software and systems.

Given these practical interests, my theoretical background, my aptitude and academic potential for graduate study (indicated by my GRE General score of (V 700, Q 790, A 780) and Computer Science Subject score in the 98th percentile), I feel that pursuing a PhD degree in Computer Science is a step in the right direction towards my long term career goals.

Thirty years from now, I want to be able to look back at the accomplishments of my life and feel a sense of satisfaction. Satisfaction, because my work made a significant impact in my field. And if I can achieve this goal I will consider my career a success. Over the past four years, I have become absolutely convinced that the path towards this goal will involve leveraging my current skills and abilities to make significant contributions to improve the understanding of systems and concepts in the field of Computer Science. Six or seven years from now, I see myself as part of a leading research group, contributing my bit to the field of Computer Science. A PhD in Computer Science, is therefore a natural first step towards this goal.

I plan to work towards a PhD in the field of **Distributed Systems and Networking**. I have become interested in this area during the course of my undergraduate studies at IIT Bombay, through a series of research and project experiences.

In my junior year, I presented a home paper on “Wormhole Routing in Interconnection Networks.” Currently, I am in the midst of my year long B.Tech thesis, titled “Distribution Strategies for the Satisfiability Problem,” guided by Prof. G. Sivakumar (PhD, University of Illinois, Urbana-Champaign). For this thesis, I am writing a distributed solution for the satisfiability problem, on a network of workstations. My work will involve studying various distributed

computing techniques and writing a distributed version of existing sequential solutions to satisfiability. Moreover, this semester I have undertaken as an Operating Systems course project, a study of implementation issues in “Group Communication in the *Amoeba* Distributed Operating System” and will be crediting a Postgraduate elective — “Foundations of Parallel Computation” in my final (next) semester.

In my opinion, the effective communication of ideas is an important part of any research career. During my undergraduate years in IIT, I have been fortunate to have had some experience in teaching basic Computer Science. In my junior year, I was a teaching assistant for an institute level introductory course in programming, “CS 101: Computer Programming and Utilization,” for freshmen. The work involved conducting tutorials, grading assignments, and providing assistance during practical sessions.

In my junior and senior years, I have been the Technical Coordinator, and subsequently General Seceretary of the Computer Science and Engineering Association, IIT Bombay. In this capacity, I have been actively involved in planning, organizing and lecturing at, various workshops on UNIX aimed at both technical and lay audiences. These experiences have been extremely rewarding, and I am sure they will help me in any teaching duties as a graduate student, and later on in my career.

I am confident that my strong motivation, my undergraduate experiences and my analytical aptitude will help me to measure up to the rigours of graduate study. I am looking forward to make my contributions to the research going on at Dartmouth.

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