

Columbia University

Application for Graduate Admission

Department: **Computer Science**,
Semester: **Fall 1999**, Degree: **Ph.D.**

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Statement of purpose

When I began my undergraduate studies in Computer Science and Engineering, I had the opportunity to expose myself to the full range of the department's courses. This stimulated my interest in various areas of computer science and gave me invaluable academic insight. In addition, the professors of the department have contributed to my development with their knowledge and personality and several influenced my goals from the conversations we had. At this time I know that a researcher's interests should span several areas in order to have a broader view of his science and not simply being restricted to a specific area. However, I do understand that, in order to be a successful researcher, it is necessary to be specialized in a field. As a senior student, I also have my research interests. I am mostly interested in **database** issues and especially in **information retrieval**, **non-traditional multimedia databases** and **web-based databases**. In addition, I am interested in **human-computer interaction** and in **quality of information** issues due to their high affiliation with the area of intelligent information retrieval.

My plans are to move ahead with graduate work, towards my ultimate degree objective: the Ph.D. degree. The ultimate reason for obtaining a PhD degree is to continue working in a top-20 school in the United States, as a professor.

I am confident that I am well suited for graduate studies in computer science for several reasons. I am hard working and persistent, but what I really believe is my strong point that sets me apart from the other applicants, is the fact that I'm very organized and meticulous; almost obsessed with the idea of perfection. Being in the computer science world, I know very well that the level of graduate programs in the U.S. is by far higher than in any other country. I am also highly aware that Columbia University has one of the most distinguished graduate Computer Science departments in the United States. Especially in the area of databases and in the area of digital libraries, which are my primary research interests, your department's research groups are of the strongest in the US and they are involved in various interesting projects. In addition, the research interests of your outstanding faculty are poles of attraction for me as a scientist. Finally, the extensive research facilities have served to kindle my interest in attending.

I would also like to mention that my interest in computers started when I was very young, during the last years in primary school. I learned to program very young and during my teens I was working as a teacher of programming in a private computer school. In addition, I was actively working in the field of databases as I have created a G.I.S. database for the municipality of my hometown. Therefore, when the time came to choose a University department for my studies, my choice came as a natural one. I opted for the top Computer Engineering and Science department in Greece, the Computer Engineering and Informatics Department (CEID) at the University of Patras and I managed to be admitted in an enviable rank (7th out of 120).

The courses that I have attended were not only educational but thought provoking as well. It would be space consuming to refer to all my undergraduate assignments and projects, since there is a description of them in my resume, but I would like to mention the most important of them. Even in my early years as an undergraduate, I was given the opportunity to develop programs for innovative projects (distance learning through Internet/1995) under the supervision of Professor Theodore Papatheodorou. During the operating systems course, I had implemented the file-system of a UNIX-like OS, using advanced data structures and space and time efficient algorithms. Later, I developed programs that were emulating various distributed protocols in an advanced simulator of distributed systems and performed performance analysis of them under the supervision of Professor Paul Spirakis.

During my studies, I started working in Computer Technology Institute, a research institute strongly affiliated with the CEID, and there I was given the opportunity to see how things actually work in a professional environment. I have worked as a system administrator during my first years in the institute and as a network manager later. During the last two years, I have worked on several research projects and gained valuable theoretical and practical experience. Working as a professional, I believe that I have a broader and more realistic perspective of computer science than the average student. Even while working full-time, I managed to study and fare exceptionally with my studies and to be ranked first in my class.

The project that most influenced my interests was a project named “Odysseus” whose primary goal was to employ advanced networking facilities to schools and to discover innovative methods in order to use the educational software through the Internet. As I have worked for this project extensively, I realized the immediate need for efficient methods for accessing the information (textual and multimedia) and the necessity for easier-to-use tools to retrieve information that meets a user’s actual needs.

My diploma thesis, named “Algorithms for information retrieval” involves a review of the existing methods in information retrieval and research on certain open problems in the area of text and multimedia databases. Working under the supervision of Professor Athanassios Tsakalidis, I am trying to invent and implement methods for evaluating the content of documents that include nontextual information such as images, sound and video.

Finally, I would like to mention that I am well aware of the demands and long hours of study that a graduate school imposes. Of course, I am also aware that the school setting would provide an important geographical and cultural change for an international student such as me. Nevertheless, I know that this change will be beneficial for me in many ways, academically, linguistically and emotionally. I know, too, that I have the will, the intelligence and the stamina to succeed in this exciting academic experience. I hope you will give me the privilege of continuing my studies at your distinguished institution.

Signature:

Date: 18 December 1998