

## Personal Statement

I come from a liberal arts family, my parents were both art majors in college, so I was subsequently introduced to painting, drawing, sculpting, pottery, poetry, photography, and music at a very early age. Art was my first love as a child, I started drawing in kindergarten, and I can remember several drawings of mine being displayed across the country in an exhibit of exemplary kindergarten art work. I stayed true to this love until I met my second love: music. I began performing on the trumpet at the age of 12. During Junior High, I was the first chair trumpet at Hilderbrandt Intermediate School in Houston, Texas. I won several awards for outstanding soloist, and was third chair in the District Honor Band my eighth-grade year, as well as the first chair trumpet in the District Orchestra. It was also during my eighth-grade year that my father was laid off from the Compaq Corporation, and so we packed up and moved to a little Kansas town, far from the energetic hypnotic beat of the city. Moving from a high profile position in Houston's Junior High music scene to "no where" Kansas was the first major disappointment of my life. The competitions I lived and breathed for were not allowed by the Kansas State Board of Education. My interest waned from sheer atrophy. Again, I dabbled with art and won a few awards for my work as a High School Freshman. It was at this point in life I began to gravitate into the field of computer science.

My father had brought home an AMD ATjr PC when I was seven years old, since that time I have been a proficient computer user. Indeed, I actually learned to program BASIC on a radio shack computer when I was ten years old. During my Junior year of High School I studied computer programming formally for the first time. After graduating High School, I continued my formal studies of computers in college. I finished my Associate of Applied Science Degree in Computer Information Systems in the normal two years. Then, feeling that I should put my skills to work, I ventured into the realm of corporate America for the first time. Nine months later I was back in school pursuing my Bachelor's Degree in Computer Science at Oklahoma State University.

During my Senior year, I took a project class, taught by Dr. Marcin Paprzycki, focusing on distributed and parallel systems. This class led to my first introduction to academic research, a strange and wonderful experience. I worked under Dr. Paprzycki's direction on his e-Travel research project, dealing with distributed software agents and their application to e-commerce in the travel industry, and published one paper on this topic.

I pushed hard to regain the ground I lost over my nine month hiatus, taking 21 hours a semester (at times) to finish school, while concurrently working full time for a consulting firm in the computer industry as an intern. When I reached graduation, I was emotionally and physically exhausted. Graduation from college led to the second major disappointment in my life: my exodus from my beloved academic studies. I had continued to work with Dr. Paprzycki on his project, despite having graduated, until torrent pressures from my new responsibilities at work made continuing my research an impossibility. Reluctantly, I abandoned my official role within the project, but managed to stay involved tangentially through social contacts, inserting my design opinions where appropriate.

Working in the computer consulting industry has presented interesting and technical challenges for me, however, my work there has not been intellectually challenging or stimulating. To pacify my creative and intellectual needs I began developing some academic research ideas of my own. I enjoy developing research ideas to such an extent that I began to believe my path in life lies in academia. In order to get back into the groove of the academic world, I came back to Oklahoma State University and enrolled in a graduate level class. Mainly, I have been designing an architecture for efficient large-scale distributed systems utilizing dynamic clustering. To this end, I gave a presentation at the 14th Annual Research Symposium at Oklahoma State University (March 2003) and received the honor of Best Paper Presentation in a Physical Science.

My current research focuses on optimizing the network efficiency of large-scale distributed systems, with respect to GRID computing. I am currently working on developing a model which incorporates clustering as a way to gain efficiency in the work flow aspect of distributed systems. Part of this project will incorporate a distributed system simulator, which will be built around transit-stub network models to simulate Internet latency in a distributed system, a marketing model to represent CPU usage by country,

and client-side model to represent the expected work unit per CPU type (Pentium III versus AMD K62, etc) over time. My past research experience includes an in-depth study of mobile software agents and their uses in distributed systems, as well as brief looks into data compression and encryption algorithms. Currently I am seeking to continue my research into the field of distributed, parallel, and GRID computing, especially their applications in secondary venues of science, such as biology, chemistry, telecom, etc. I am also interested in the application of genetic programming, genetic algorithms, cellular automata, chaos theory, and emergent behavior to distributed systems, as well as other cross-discipline areas of computer science.

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