



## Profiles in Computing

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**Education:** BA, English, Columbia University  
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**Advice to students:** The theoretical and mathematical foundations of computer science are much more important, and much more interesting, than you might hear from a lot of CS people. This is especially the case if you are coming from a humanities or arts major. Also, CS gives you a lot of therapeutic practice in taking your emotions out of your problem-solving—thinking in a cool and rational way about problems and mistakes instead of getting upset about them.

**Q: Please describe your path to becoming the computing student you are today.**

**A:** As professor of Literature, I was frustrated with the dogmas in that field, and felt I had done what I could to address them in my research. It occurred to me that I had to change careers. During that time, to manage my own website I learned JavaScript and C by myself. Then, I got a part-time job at a software firm. I noticed the gulf in knowledge between myself and real engineers. I quit my job and went back to school in CS. I still felt that I didn't learn enough, so I went on to a PhD. CS is a complement to my knowledge and thinking in the humanities. Now I get to use both sides of my brain.

**Q: What is your major and why do you love it?**

**A:** I'm pursuing a PhD. in computer science specializing in systems. I love systems because it puts theory and practice together so tightly. You get to build things that work (you hope!) to solve known and pressing real-world problems, and you get to work with the deep-down nitty-gritty of computing machines and programs. This gives you powerful insights into the whole continuum from high-level theory and abstraction all the way down to instructions and transistors, and back up.

**Q: Please describe 24 hours in your typical day as a computing student.**

**A:** Currently, I'm working on my dissertation, so my schedule is free-form. I put many hours into programming and debugging, looking up error messages or techniques on the Web, and posting queries on Web forums. My research is in ensuring that parallel programs behave as



expected. I am adding features to the system and preparing tests to show that my system is efficient enough to be practical.

I sometimes read and judge research papers for conferences. I work alone almost all the time, but I meet with my advisor regularly. I also take time for my partner, family, and friends, exercise every day, shop, and cook.

**Q: Please describe a computing-related project of which you are most proud.**

**A:** In a databases graduate course, I learned about the B+ tree data structure for data storage and retrieval. To deepen my understanding, I decided to translate the algorithm in the book into a working C program. I continued to improve the design and add descriptive comments. I made the code public, with a link from the Wikipedia article on B+ trees. I've heard from people who have used the code to understand B+ trees, and develop real-world applications, some quite complicated, and my work was cited in at least one research article.

**Q: What are your hobbies/ interests/ passions beyond studying computing?**

**A:** My long list of interests includes politics—local, national, and global; economics; social justice; history; philosophy; poetry; great literature; classical music (especially baroque); architecture; visual art (in museums and galleries); dance (ballet, jazz, modern, avant-garde); and film (independent and foreign); linguistics; different cultures; mathematics; physics; and physical exercise (weight lifting, swimming, running, biking, and dancing).