Profiles in Computing

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Advice to students: "Computing" is a great way to follow your curiosity and have fun doing it. Look around you: most of what you see required someone just like you to dream up something new and then build it. It's great to be part of that!

Q: Please describe your path to becoming the computing professional you are today.
A: Starting in elementary school I kept a "junk box" of salvaged parts from which I built various "inventions". In junior high I was first exposed to "cloud computing" when I accessed computers via 300 bits-per-second dial-up and a Model 33 teletype. I was an electrical engineering major at RPI, focused on digital circuits and control systems; through a co-op (academic credit for job experience) at IBM Fishkill I gained a passion for the special-purpose systems one finds in manufacturing and test equipment. I ended up as a test equipment engineer and project leader for Digital Equipment Corp, developing high-performance memory test systems, during which time DEC sent me to get my M.Eng at Cornell through a fellowship-like program. After eight years I moved on to pursue my Ph.D. at Dartmouth; my original plan was to study special-purpose systems, but I ended up studying the unique technical/legal/social issues of managing copyright on the Internet just as the Web was coming into being. After two startups, I worked in corporate research at Hewlett-Packard Labs for a decade; I am now in academic research.

Q: What is your job and why do you love it?
A: My primary responsibility is research project management for several concurrent projects of different scales. I provide a critical level of guidance and support between three senior professors and a large team of post docs, graduate students and undergrads. I love the daily intellectual challenge of helping the team create something totally new. Students don't know what they can't do, and therefore create amazing and surprising innovations!

Q: Please describe 24 hours in your typical day as a computing professional.
A: I start my working day at 7a, catching up with the overnight email traffic from my European colleagues and our students, who never seem to sleep! I review the day's conference calls; I work remotely from Vermont for part of the week and therefore do a lot via Skype. Part of my day is spent in focused email or Skype conversations with students, checking on status and trying to work through technical problems. Typically there is a paper

or presentation due, so some time is spent revising, hopefully using a collaboration tool. After a dinner break (and assuming I don't have some obligation in the community) I'll find time to work on the current boat and do emails.

Q: Please describe a computing-related school or work project of which you are most proud.
A: As a graduate student I had to take a feedback and control systems course to fulfill some "core" requirement. This class had a term-ending project --- nowadays it might be called a 'capstone' project --- that usually involved the students using stock instruments from the lab to demonstrate some principle. Having (at that time) about a decade of engineering experience, I decided to instead build from scratch a small robot that would use ultrasound to position itself. It was a very ambitious project that required both analog and digital systems engineering plus some low-level Macintosh programming, using a wide array of self-acquired parts, some of which (like a small battery-powered bulldozer) were found at a toy store! On the final day the "Sonic Ranger" worked perfectly and ended up in a display case in the engineering building for a short time. It was intense work over a short period of time but was a lot of fun!

Q: What are your hobbies/ interests/ passions beyond working in computing?
A: I'm a builder of wooden boats, homebrewer, vegetable gardener and am a volunteer leader on an annual youth group work trip to the southern US.