

# Faces of Computing

Careers in computing offer a variety of exciting opportunities. The stories here tell about real people in real jobs – we hope they will give you a sense of the excitement and motivation computing careers can give you.



These [University of Washington students](#) are majoring in Computer Science. Check out their stories!

Students at UC Berkeley answer the question:  
*Why Computer Science?*

Valerie Ishida, Junior



CS was a pretty natural choice for me. As a kid I was good at math, and both my parents were Computer Scientists. I spent a lot of time playing in MS Paint, and in middle school I fiddled around with Visual Basic. My parents didn't push me to like a specific subject, but I knew since I was 12 that I wanted to be a Computer Scientist. I was excited by figuring out things like why Gameshark codes were in hexadecimal, and I enjoyed number games. When I began college and took CS courses, I knew it was exactly what I'd always wanted to do. I've stayed in CS for the same reason. There've been plenty of tough times and disappointing results, but that's life, not disillusionment with CS. There's always something more to CS that's interesting and exciting, and there's nowhere else I'd rather be.

Yanpei Chen, Senior



I was born in southern China, I went to a high school in Australia, my parents are in New York, and I study in California. I have been all over the place, and for a time, my career plans were all over the place. In high school, however, I decided on a career in CS. It was clear that technology was having an ever-increasing impact on people's lives, and at the time (early 2000s), there was still a residual "dot com" mentality. In the few short years since then, CS has been the engine that has propelled drastic innovations, including wireless internet, YouTube, Wikipedia, iPod, and Xbox, not to mention ever more powerful and affordable computers. Today, CS has relevance to many areas, both technical and non-technical. Of all the prominent professions, CS is perhaps the only field that has such broad impact. In my opinion, CS is the only area that promises immediate solutions to people's day-to-day problems, as well as offering long term service to our society. In addition, knowing CS is so helpful for daily life—various CS algorithms have day-to-day applications from planning a trip to buying some milk—and CS knowledge creates such an incredible sense of knowing what's going on with regard to the technology products around us. I am very excited to be a constantly growing CS professional!



Yuly Tenorio, Junior

I was born and raised in Lima, Peru and came to California when I was 17. Here in the states, my first goal was to learn English, but after that I had to decide what to major in. After I took my first computer science course, Introduction to Programming, I knew I had made the right choice. From the very beginning, I loved programming and problem-solving. I realized that what I was learning had actual applications to so many real-life problems. For instance, knowing how an elevator works—coming up with the best algorithm to make it perform quickly and consistently. How does Mapquest work? How does it find the shortest path from your starting point to your destination point? How can Google search so many huge files so fast? How does your computer work? These are some of the questions that are fascinating to me. As a Junior Computer Science student, I am learning all of this and more. I am very excited to learn so many interesting things every day and to know that I can learn from all the different aspects Computer Science encompasses: Artificial intelligence (wouldn't it be cool to make a robot do your chores for you?), computer graphics (make computer graphics look like actual

real people), algorithms, databases, and much more. All of this is why I am proud and happy to have chosen Computer Science.

Omar Akkawi, Junior



Ever since I was young I've enjoyed building things. I started building with LEGO® blocks (which I still enjoy), and eventually moved on to models and radio-controlled cars as I got older. My parents thought I was destined to be an engineer, or an architect, up until the point they brought home the family's first home computer. I was instantly fascinated with everything I could do with that simple device. From that point on I wanted nothing more than to be able to make the computer do what I wanted it to do. When I learned that it was possible for somebody to go beyond just using software that already existed and build their own software, I was hooked. My love of building extended into the virtual realm, and I fell in love with building my own software. For me, the thrill of working with a piece of software that I've built exceeds the thrill I get from working with something I've built with my hands. The lack of physical restrictions in the virtual world lets me do things I never dreamed about doing in the real world.

Jerry Hong, Junior



Ever since I was a kid, I've always wanted to know what goes on inside a computer. I was curious about what allows a computer to know how to run a program, such as Pac-Man. However, it did not hit me that CS is what I wanted to do until senior year in high school. My advance topics CS teacher taught us many uses of algorithms, from RSA encryption to creating search engines and simulating MapQuest. I was awed by the powers of CS, for I could actually create programs that are useful for people. I felt that if I developed my skills, I could potentially impact the lives of many people. After continuing CS at Berkeley, I have learned that CS is a world of many problems and challenges. There are constant demands and pressures for new inventions. I enjoy working on leading technologies and I love to take on challenges. Now that I have finally solved my childhood query (the operating system), I am ready to take on more problems—such as solving games in the Gamescrafters undergraduate research group.

Matt Jacobsen, Senior



(Fall 2008 UC San Diego graduate student)

I really didn't know what to major in when I got to UC Berkeley. I chose Business Administration because it seemed pretty useful and I figured I could get a job with that degree. I had spent most of my non-school time interested in website design, graphics, and generally learning to use operating systems and software. After I graduated, I took jobs doing web application work. That led to more and more jobs doing programming and "lower-level" CS work. It wasn't until I had worked for a number of years doing this kind of work that I realized CS is really what I had wanted to do all along. I went back to school to get a Ph.D in CS.

A common misconception is that CS means sitting in front of a computer all day long. This may often be the case for programming, but CS is a large field. There are many applications that require CS skills that involve little or no programming. And for those programming jobs, the reason it's possible to sit in front of a computer for extended periods of time is because in CS we can learn new things, achieve goals, and be creative. Every day! It's this last point that really drives me, personally. If you ask any passionate person how they can "\_\_\_ all day long," it's because that's their outlet for being creative.

Doug Densmore, Computer Engineering Graduate Student



I always liked puzzles. I particularly liked puzzles where you could test your solution. To me there was nothing more exciting than solving a problem and then getting to see that the solution you created was actually able to solve that problem for a wide variety of people. To me, CS is an exercise in solving puzzles. Almost everything that one does in computer science can be abstracted into some sort of puzzle. The great thing is that often there is more than one way to solve the puzzle. This is where applied computer science deviates from a lot of traditional science fields. It is in this way that you get to express your artistic and creative side while still being in a technical field. That has always been the allure for me.

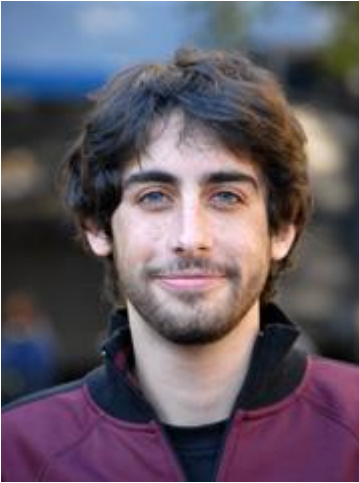
Growing up in rural Michigan, it would have been very easy to miss out on a great number of experiences. However, being involved in CS has enabled me to travel the world (Europe and South America), open up the entire country (through internships and conferences), and speak to a wide variety of people of different backgrounds and ideas. There is no shortage of exciting problems out there, and there are unique ways in which computer science and global technology usage trends merge. This makes computer science truly a global field with tremendous growth opportunities.

Albert Chau, Junior



In 7th grade I spent two months putting together a 3-D Star Destroyer puzzle. It felt amazing to finish because all the stupid little pieces looked exactly the same, and the finished product was 3 feet long and a foot tall (I still have it around). I feel the same way about computer science. The way I see it, my job is to build programs and solve puzzles. Honestly, it's very fun. It's also very frustrating at times, but it's also something for which the hours will just fly by as I'm doing it. And when I've finished solving the puzzles and building the program, the end result is really amazing. For example, in one class I made (from scratch!) a wireless version of the game TRON that you played using Nintendo64 controllers. For these reasons, I am proudly and happily in Computer Science.

## Benjamin Sussman, Junior



Although I was born in California, at the age of five I left the United States for Asia and received my younger education in international schools in Manila, Philippines and Jakarta, Indonesia. Although I was far removed from the quickly growing tech industry, the long tendrils of the internet still managed to reach me when in seventh grade I discovered Napster. The fact that I could communicate with music fans all over the world, learn about new music and share my own music all through something made by a student was insane to me. I always found school very easy, and when I came back to the US, going to UC Berkeley was an easy choice to make. I initially entered the University as a Physics major, but after a few semesters of just-for-fun Computer Science classes I realized how much more enjoyment I got out of completing complex projects and designing challenging systems. Within one year I went from learning what cons \*actually\* does to designing hardware with Verilog and implementing large data structures to increase the speed of database queries. With all the great professors, challenging and rewarding projects and possibilities for the future, Computer Science is clearly an awesome major.

## Aaron Staley, Junior



As I was playing *Unreal Tournament* one day as a fifteen-year-old, I decided that it would be really awesome if the game had more features. I soon learned *unrealscript*—a java-like language that much of the game is written in—and wrote modifications which customized the game in any way I wished.

To me, computer engineering is about customization. I know of no other field that allows a person to so easily turn a vision in their mind into reality. And so, upon entering college, I opted to do computer engineering—and have stuck with it ever since.