It all started from a command-line game (in NC DOS operating system) that I used to play with. Our very first computer had a large white case, during my childhood and I just wanted to see what's inside that white box. My curiosity developed the more I learned about that white box. I wanted to be the one who tells that white box what to do. Here I am, pursuing my Ph.D. in Computer Science.

The coolest project I have been working on is the Smart Home Automation System. We apply state-of-the-art models and algorithms to schedule smart devices within smart homes in an efficient manner which help home occupants to control the energy consumption in their homes.

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I didn’t really get into computing until my master’s project, where I used machine learning to make traffic predictions. As a math major I was so excited about doing something useful that I pursued a Ph.D. in machine learning. That’s when I really started to become a computer scientist using a Linux computer and appreciating everything command line!

One of the coolest projects I worked on so far was developing a machine learning algorithm to classify plant diseases from cell phone images. This project was not only challenging, since I managed the entire pipeline from going out in the field to collect training data, over image processing and feature generation to training and tuning the actual classifier, it is also extremely useful in practice. It helps farmers to identify diseases in crops early and without having to consult an expert. It literally saves money and helps making agriculture more sustainable!
Neha Singh  
CSE Lecturer

Having Computer science (CS) background helps but combining the power of CS with data and mathematics can lead to wonderful projects. The interdisciplinary domain and applying data science to solve problems got me interested in my PhD. I joined as a faculty in the Department of Computer Science & Engineering in Fall 2021.

My research domain is artificial intelligence and is applying machine learning and natural language processing methods to solve the interdisciplinary problems of disaster management to assist the emergency managers in rescue and aid operations. The goal of my work with the multi-modal data sources is to build efficient predictive models which can extract crucial relevant insights and information regarding the disaster in real-time.

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Steve Cole  
CSE Senior Lecturer  
CSE Director of Diversity, Equity, and Inclusion Initiatives

I didn't know a thing about CS until college; I took one class that was required for my Math major and eventually got hooked. Took it one step at a time (minor, major, M.S., Ph.D.) b/c at each step, I was unsure whether I wanted to continue.

I'd say my experience earning my M.S. at the U of California-Riverside. I was coming off a year of volunteer work in Central America after college, and I'd decided during that year that I wanted to continue learning more CS. During my time at UCR, I was living in a new place, learning what I thought was super-cool stuff, feeling like the whole world was ahead of me. Young and idealistic, but very exciting. :-) I faced the challenge of feeling (and probably actually being) rather unprepared for the coursework compared to my peers, since I'd come from a small liberal-arts UG institution without nearly the CS technical preparation as most programs. I had to study pretty hard my first year to catch up; what helped was that I was a full-time student so I could devote myself entirely to my studies, and that I had friends in my classes -- we formed a good cohort, would study together often and do group projects together.

Talk to me about…
- REU/research
- GHC/TAPIA
- Security
- Algorithms
- TAing for a CS class
- Doing a PhD

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Cynthia Zhou Ma
CSE Lecturer

After graduating Swarthmore College in 2014 with a double major in biology and computer science, I the Brent Lab at Washington University in St. Louis. My research focus was the analysis of gene expression data to model gene regulation, specifically the role of transcription factors (TFs) and the inference of TF activity in different conditions. After receiving her PhD, I joined the teaching faculty of the McKelvey School of Engineering in Fall 2022.
When I was in my first year of undergrad, I took a functional programming course with my friends just for fun. I joined the course with no future plans of pursuing Computer Science as my major. To my surprise, this course ended up becoming my favorite that semester and I realized my passion for designing and building applications. Fast forward a couple of years, I was provided with an opportunity to be a part of the REU program at WashU. This opportunity led me to where I am now, a rising 5th-year Ph.D. candidate in CS.

The coolest CS-related experience that I have had is attending and presenting my own work at the IEEE VIS Conference in 2022. I had the opportunity to hear about state-of-the-art research and network with well-established researchers within the field of Visualization/HCI. Speaking to a conference room full of people was quite nerve-wracking, but it was very rewarding and surreal to discuss my work with researchers all around the world.
Sonia Das
junior/senior

I taught myself some basic Java over quarantine in 2020 and really liked how many applications of technology there were. I ended up pursuing tech because I believe that technology is so ingrained in our society now that I want to be able to help make the next best thing!

I worked at Google this summer and I was able to work on Gmail for iOS clients. I worked on implementing the blue check mark for email senders to help users better identify spam. It was so cool to work on something that had such a big impact and helped make email safer.

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Camila Garcia-Novelli
CSE BSMS Student

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Talk to me about...
✓ BSMS
✓ CSE TA experience
✓ Software Engineering Internship
✓ TAing
✓ GHC

Around sophomore year of high school I randomly got curious about how websites worked. I happened to come across some basic HTML/CSS tutorial on Tumblr and messed around with that. I enjoyed it a lot, so I decided to join a code-interpreting event in Science Olympiad and then take AP Computer Science independently my senior year. I’ve TAd several classes, including 247, 231, and 347, and been Head TA for 131.

My first internship was Facebook University for Engineers, a first- and second-year training program geared towards women and other minorities in tech. Since then, I’ve done regular internships at Facebook, Asana, and IMC Trading. The coolest project I’ve ever worked on was improving the accessibility of the Asana website. My team and I got to see our changes allow people with screen readers and other assistive devices to use our site.

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I'm in the BSMS program working toward a master's degree in computer science. I studied math and financial engineering as an undergraduate. Currently interested in doing data science. I took my very first coding class during my freshman year. I knew coding skills are helpful but didn’t expect the class to be so interesting. So I took more CSE classes after that, mainly focusing on machine learning. I also had a short internship as a data scientist with a start-up company during my junior year.

The snake game for the final project of 131 was one of the coolest projects I did. The game itself is not hard to write, but the process of updating the game to make the animation prettier and smoother, and to add new features to the game, was interesting. After making the game playable, I also explored ways to automate the game. The stupid solution that I implemented was using Hamiltonian cycles. A smarter way would be training an AI, and this was my first contact with machine learning.
Seema Mukhi Dahlheimer
Teaching Professor & Assistant Director of the Engineering Communication Center
Division of Engineering Education

I have been with the McKelvey School for 13 years, and with WashU for about 20 years (first as a student, then as an instructor). I teach Technical Writing, Engineering Leadership & Team Building, Engineers in the Community, and Reflective Writing in Medicine and Healthcare.

Believes that education can be a force for liberation and freedom, and through engineering, we can build a more just and equitable world. Seema Dahlheimer's pedagogical approach is to make her classes as active as possible, because she truly believes we learn best through doing and we learn best from each other. She especially likes getting to know her students as people — their interests, backgrounds and goals.

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Sandra Matteucci
Director of the Engineering Communication Center
Senior Lecturer

I currently teach Technical Writing and Engineering Ethics and Sustainability, both required courses for undergraduate engineering students. In my role as Director of the Engineering Communication Center, I recently expanded offerings to include graduate courses in Communication Tools, Publication Writing, and Presentation Skills.

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Talk to me about...
✓ Responsible CS challenge
✓ Engineering ethics
I took introduction to CS (131) at WashU in my first year. From that class, I learnt how to program and code for the first time, and it was a very inspiring class with many fun projects. I'm also always interested in technology and its applications in many different areas. I'd love to learn more about how the internet and computer will change our future. That's why I started to pursue my major in Math+CS.

I did a technology internship in the last summer. It was my first internship and also my first exposure to industry level projects. I was in the infrastructure team and helped build a pipeline for improving efficiency of software delivery. It was very different from any class projects I've done in the past. The industrial requirements were also very different from school criteria. But I enjoyed most part of my work. Especially the culture in the tech industry is usually very chill and relaxed.

Talk to me about...
- WiCS
- REU Project
- TAing for a CS class

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Annabel Rose
sophomore

I took an intro course for my required technology credit in my freshman year of high school, and I really enjoyed the process of finding an efficient solution when there’s many approaches to a problem. Because I’ve always been very undecided on a possible career path, I stuck with CS because it’s applicable to any industry.

I TAed for intro CS last semester, and I thought it was a really rewarding experience and I loved helping students who had never been exposed to programming increase their knowledge and appreciation for the field. In my opinion, knowledge of CS is the most marketable skill out there; an understanding of important concepts and a background in programming is applicable to any industry, and opens so many doors career and opportunity wise.
Michelle Kwan
junior/senior

I became interested in CS after taking a computer science class in high school. Beforehand, I did not have much exposure to engineering and therefore did not even consider pursuing it. I found myself excited to solve problems and apply analytical thinking skills. My teacher was also my favorite teacher from high school because of how attentive he was and dedicated to ensuring every student understood what was being taught.

The coolest CS-related projects I worked on in my career in computing so far was a mobile app to create multi-sided flashcards and a calculator tool for the team I was a part of this past summer for my internship. It was an enriching experience to help create programs that would be put into use. The app was meant to aid students studying for subjects, such as Chinese or biology that would require more than just a term and definition. The calculator tool was something my team anticipated on using in the future after my internship ended.

Talk to me about...
✓ WiCS
✓ Grace Hopper Celebration
✓ HCI minor

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I liked coding because I could create tools to help myself. When I wanted to check some physics problems, I wrote programs to confirm my answers. When I couldn't find a scheduling app that met my needs, I coded my own. It was this "maker" mindset that propelled my drive – I enjoyed this creative aspect: thinking about problems and designing solutions, selecting the best algorithms and user interfaces.

BeatReal is a music version of BeReal that I created with 5 other peers when I was studying abroad at Trinity College Dublin! It was my first experience leading a project, and I learned a lot through managing the team and using tools such as Jira. It was initially difficult to go through spring planning and delegate tasks/next steps, but exciting to build something original completely from scratch. I learned how conflict is inevitable when creating something, but good collaboration played a key role in solving these and the overall team's success.
My interest in CS stems from its technical connection with creativity, especially within UI/UX design and front-end web development. The art of seamlessly merging visual aesthetics with functional interfaces has and continues to inspire me. This passion was kindled by the extraordinary contributions of individuals like Tigris Li, an artist and hardware engineer, whose journey I first began viewing during the COVID-19 lockdown via her informational TikTok videos.

One of my standout CS experiences was creating a website for a St. Louis nonprofit dedicated to providing mental health support for the queer community. Despite facing challenges like working with an unfamiliar coding language, I managed to learn it through online tutorials. Additionally, since design wasn’t my strong suit, I had to research accessible design guidelines. Overcoming these obstacles was truly fulfilling, as I not only enhanced my skills but also contributed to a meaningful cause, highlighting the impact of computing in real-world applications and reinforcing the importance of adaptability in CS projects.
Switched into CS the second semester of my sophomore year. Before that, I thought I would major in Chemistry, and then Computational Biology. I enjoyed my CS classes the most because of the universality of problem solving. Even without knowing the technicalities of biology, I was still able to work in a Computational Biology lab the summer before my junior year using solely my Computer Science skills.

Something else - diversity in computing, especially, gives way to more accessible technology. For a long time, men were the sole designers of our world (ex: temperatures in offices being set according to what is most comfortable for men, therefore being too cold for women). Ultimately, accessibility benefits us all.