CAREER CONNECTIONS

Meet six different cybersecurity experts and artificial intelligence specialists who are at the forefront of technology, keeping us safe from online criminals and figuring out how to make technology better, faster, and smarter.

THE FASHION-INDUSTRY INNOVATOR

Shana Chu

CEO/Founder of STYL.wrap and Advocate for Sustainability

What I Do and Why I Do It Sometimes when we shop online, we order the wrong size. This leads to waste, high return rates, and a notable environmental impact. I founded STYL.wrap to help make the fashion industry more sustainable. We use AI to solve size and fit issues, from helping to streamline the design process to recommending sizes to online shoppers.

What Inspired Me I worked in the industry as a garment technologist, and I could see the industry needed to change. I knew I had to put myself out there and solve it.

How I Tackle Challenges Starting a business is not for the fainthearted. This journey has been a thrilling roller-coaster ride, pushing me out of my comfort zone daily and testing my endurance and my ability to bounce back from rejection. It was a challenge at the start to hear criticism and "no," but rejection was a learning opportunity that brought me closer to "yes," and I'm thankful for the difficult experiences along the way.

Words of Advice Learn as much as possible about the human experience—after all, machines are built by humans and reflect our logic. In the fields of AI and cybersecurity, knowledge of language, art, psychology, and sociology are as valuable as knowledge of coding.

SPOTLIGHT ON...

Joy Buolamwini

Founder of the Algorithmic Justice League and Algorithmic Bias Researcher

When Joy Buolamwini was a graduate student at MIT, she was **doing research using visual recognition software** that was supposed to identify her face. But the software couldn't do its job correctly unless Buolamwini, who is Black, was wearing a white mask. The implications of this were far-reaching and alarming, and Buolamwini started researching how bias can be built into technology and perpetuate inequities based on race, gender, and class. She shared her research in a popular TED Talk called "How I'm Fighting Bias in Algorithms." Buolamwini went on to found the Algorithmic Justice League, an organization whose mission is to raise public awareness about the impact of AI.

PROTECT YOUR TECH

The internet gives you access to information, places, and people. It also gives cybercriminals access to you. But don't worry—there are lots of things you can do to stay safe!

Change your passwords regularly. Some hackers steal personal information from computers and phones. Changing your passwords—and making them complicated by using numbers, letters, and symbols—helps keep them safe.

Think twice about uploading to the cloud. A good rule to follow: If you wouldn't want people to see it, don't upload it! That includes photos, personal information, and even text messages.

Block viruses and other malware. Virus-protection software and firewalls—programs that block certain kinds of data—can block attacks to keep your computer safe. Ask a trusted adult if your computer is protected.

Beware of email scams. It's easy to avoid opening emails from people you don't know, but cybercriminals can hack your contact list and send emails pretending to be someone you do know, from addresses you might recognize. If you've opened a message that seems off, don't click on any links, don't download any attachments, and don't hit reply. Reach out to your contact in a new email.

THE CYBERSECURITY INVESTIGATOR

Jennifer Buckner

Senior Vice President of Technology Risk Governance and Standards at Mastercard, and retired Brigadier General of the U.S. Army

What I Do and Why I Do It At Mastercard, I oversee and work with teams of cybersecurity specialists to protect the company's technologies and customers from cyber threats. Teamwork is important! Our success depends on using our different skills to work together.

How I Got Where I Am I studied mechanical engineering, which taught me a disciplined approach to problem-solving. But I also like to "hack the problem." I consider curiosity my superpower. Asking questions—rather than being told what to do and how to do it—helps me better understand the problem. Some of my best ideas come from brainstorming in small groups where nothing is too crazy to consider and everything has the potential to inspire.

How I Tackle Challenges A tough challenge can feel intimidating. But once I take a few initial steps, I'm able to see different paths to a solution. I might get it wrong at the start, but failing is a critical part of problem-solving. It allows us to learn and almost always helps us find a solution.

Words of Advice Math, coding, and robotics are important skills for working in cybersecurity, but so are design, psychology, and creative writing. A lot of my job involves storytelling—communicating technical topics through stories helps others understand what I need. Study what you love, and there will be a way to apply your skills in cybersecurity.

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THE PRIVACY PROTECTOR

Chasity Wright

Founder and CTO of
Infiltron Software Suite

What I Do With so many devices in our world, hackers have more opportunities to break through digital security and access private data. I developed a cybersecurity software suite that integrates across phones, computers, and other tech to protect users on multiple devices. My software analyzes user behavior and gives corrective solutions.

What I Bring to It After 18 years working in the technology field, I realized many communities are not represented in tech. So I use my company to create opportunities for veterans, women, and minorities.

What Helped Me Succeed Like many young women, I lost interest in math and science in middle school. When I became interested in tech as a young adult, I didn't give up when I was rejected or things didn't go my way. On my path to becoming a STEM engineer and entrepreneur, I learned that rejection is not always a negative thing.

Words of Advice Pay attention in each subject to see what excites you most. Find STEM camps and online courses for your age group. If you like doing detective work, cybersecurity might be a great field for you.

THE ETHICAL HACKER

Jack Cable

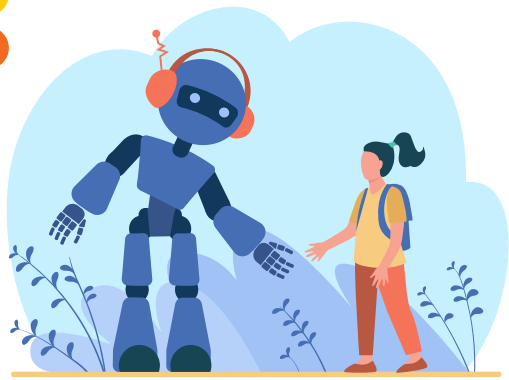
Founder of Lightning Security and college student at Stanford University

What I Do I'm a hacker. I use my abilities to help protect people and companies by discovering vulnerabilities before adversaries—bad hackers—do. I've worked at the Pentagon to help secure the Department of Defense, as well as with individual companies (Google, Facebook, and Uber) to help improve their security.

What I Bring to It I think curiosity is my most important trait. I got into security because I was curious to see how things worked. Curiosity and creative thinking go a long way when I'm looking behind-the-scenes to find vulnerabilities [a security weakness in software].

How I Got Where I Am I started programming in middle school by watching online lectures and reading books. Later, in high school, I accidentally discovered a vulnerability in a financial website. Fortunately, the company ran a "bug bounty" program—a program where they paid people like me for discovering vulnerabilities. From there I began exploring the field of cybersecurity.

How to Get Started A great first step is learning to code. If you know how something works, it's easier to secure it. From there, try to find vulnerabilities in your code, then figure out how to make it more secure.



THE FUTURE OF AI

Robots can lift super heavy objects or touch materials that are too hot for human hands. Now, thanks to AI, robots can become even more helpful to humans.

Eldercare robots already entertain senior citizens and bring them food and water. As the technology improves, these robots will help with more complex tasks like finding the remote and assessing how the seniors are feeling using facial recognition technology.

Tiny robots—known as **medical nanorobots**—are already injected into people to diagnose disease and perform some surgeries. In the future, they may "swim" through the body to deliver medicine to exact locations, helping to eliminate medicinal side effects. They may also perform surgeries on parts of the body that surgeons can't reach.

Someday, you might open your door to find a **delivery drone** bringing you pizza! Drones aren't making home deliveries yet, but they are delivering medical supplies in remote areas around the world.

THE SECURITY STRATEGIST

Jazmin Torres

Vulnerability Analyst for Mastercard

What I Do and Why I Do It My job is to identify security issues in Mastercard's systems and make sure they get fixed so criminals can't break in. By keeping Mastercard's systems secure, I ensure that our customers' money and personal information stays safe.

What I Bring to It The bad guy's methods are constantly evolving and changing, so my approach must evolve and change as well. I'm a creative person—I try to think like a bad guy so I can stay one step ahead of them.

What I Like About It Working in cybersecurity helps to protect people and the data that is precious to them. The work I do helps people feel safer. I knew this job was for me because it allowed me to combine creative thinking with my desire to protect.

Words of Advice Don't be afraid to try different things so you can figure out what really interests you—when you find your passion, success follows. Also, if you're given a challenge and it seems overwhelming, break it down into pieces, work through it one step at a time, and never be afraid to ask for help!

FIND YOUR CAREER

Which Computer Science Job Is Right for You?

Check off the activities below that you do regularly or that interest you the most.

I Like...the Arts

- ❑ Writing or making videos
- ❑ Playing an instrument
- ❑ Painting or drawing

I Like...Helping Others

- ❑ Teaching others how to do things
- ❑ Listening to others' problems
- ❑ Assisting others with physical challenges

I Like...Inventing and/or Using My Hands

- ❑ Building or taking apart machines
- ❑ Assembling furniture
- ❑ Fixing broken toys

I Like...Brainteasers

- ❑ Conducting science projects
- ❑ Playing math games
- ❑ Learning HTML and/or coding

Now, see what kinds of jobs might be in your future. (Don't recognize the job title? Put your computer skills to use and do some research!)

I like the arts: video game developer, multimedia programmer, technical writer, web designer

I like helping others: cybersecurity consultant, security analyst, IT consultant, systems analyst, health information technician

I like inventing and/or using my hands: app designer, information systems manager, IT architect, hardware engineer

I like brainteasers: computer programmer, database designer, data scientist, software engineer