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A Career in Cybersecurity

Overview

Cybersecurity is something we read about in the news almost every day as organizations and governments around the world continue to get hacked. There is a huge demand for people trained in cybersecurity to help defend against this growing threat. In fact, it is estimated there are almost 3 million openings globally. Have you considered a career as a cybersecurity professional? It is a fast-paced, highly dynamic field with a huge number of specialties to choose from, including forensics, endpoint security, critical infrastructure, incident response, secure coding, and awareness and training. In addition, a career in cybersecurity allows you to work almost anywhere in the world, with amazing benefits and an opportunity to make a real difference.

But Do I Need a Computer Science Degree?

Absolutely not. Some of the best security professionals have non-technical backgrounds from English, pre-med, or history majors to auto mechanics, artists, and stay-at-home moms. The key is a passion to learn—cybersecurity is all about learning how things work. Once you have an understanding of how technologies work you can then better secure them. What is so exciting about cybersecurity is you can learn how these technologies work at your own pace in the comfort of your own home.

How to Start

Not sure where to start? Start exploring different technologies and see what interests you.

Coding: Learn the basics of programming: a good place to start is Python, HTML, or JavaScript. Not sure where to start learning? Consider an online training site or grab any beginner's book on programming.

Systems: Learn the basics of administering an operating system, such as Linux or Windows. If you really want to nerd out, start with Linux. Learning how to administer a Linux system from the command line is a powerful skill that will help you no matter what path you take.

Applications: Learn how to configure, run, and maintain applications, such as a web server or DNS server.

Networking: Learn how a network functions, including how computers and devices talk to each other by capturing and analyzing network traffic. This can be great fun as your home is most likely already a networked environment with all sorts of devices connected to it.

A great way to learn is to set up your own lab at home. This is quite easy as you can create multiple virtual operating systems on the same physical computer, or set up a lab using Cloud resources such as Amazon's AWS or Microsoft's Azure. Once you get your operating systems up and running, start interacting with them and learn everything you can. Another option is to meet and work with others in cybersecurity. Consider attending a local cybersecurity conference (often called 'con') near you. Just about every major city has several events a year. A well-known series of cybersecurity events designed to help beginners is called BSides. The hardest part is finding that first event or meetup. Once you attend one, your network and opportunities will exponentially grow. Other options for learning include YouTube videos, online forums, subscribing to blogs from security professionals, or participating in online Capture the Flag (CTF) events. Finally, there are numerous programs to help you start your career, including CyberTalent Immersion Academies, Cyber Aces, and Cyber Patriot programs.

Ultimately, do not let your education or background hold you back. No matter what your background is, you bring something unique and special which cybersecurity desperately needs. The key is a passion to learn. Once you start developing your skills and you begin to meet others in the field, the opportunities will come.

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Guest Editor

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Resources

BSides:	http://www.securitybsides.com
SANS CyberTalent Immersion Academies:	https://uscyberacademy.sans.org
Cyber Aces:	http://www.cyberaces.org
Cyber Patriot:	https://www.uscyberpatriot.org/
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