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SANS SECURITY AWARENESS

Start A Career in Cybersecurity

Overview

As a result of a growing number of hacks on organizations and governments around the world, there is a huge demand for cybersecurity professionals to help defend against today's cyber attackers. Have you considered a career in cybersecurity? It is a fast-paced, highly dynamic field with a huge number of exciting specialties from which to choose. In addition, a career in cybersecurity allows you to work almost anywhere in the world, with a variety of benefits, including the opportunity to make a real difference.

Don't I Need a Computer Science Degree?

Absolutely not. Many of the best security professionals have non-technical backgrounds - from Philosophy, History, and Library Science degrees to auto-mechanics, dental technicians, and stay-at-home moms. The exciting aspect of cybersecurity is that you can start learning at your own pace at home.

Where to Start

Cybersecurity is ultimately not about how to break into or hack things; instead, cybersecurity is about learning how things work. Once you understand how technologies work and interact with each other, then you begin to identify the vulnerabilities that need to be secured. Not sure where to begin? Start exploring different areas of technology and how they work, and then see what interests you.

- **Coding**: Learn the basics of programming. A good place to start is Python, HTML, or Javascript. Consider an online training site or grab any beginners book on programming. It's easier than you may think!
- **Operating Systems**: Learn the basics of administering an operating system, such as Linux or Windows. If you really want to nerd out, learn how to use something called a Command Line Interface (CLI). This is where you learn how to type commands, as opposed to clicking on icons.
- **Software Applications**: Learn how to install, configure, and maintain software applications, such as a web server.
- **Networking**: Discover how computers and devices talk to each other by configuring, capturing, and analyzing network traffic. This can be great fun as your home is most likely already a highly networked environment with all sorts of devices connected to it.
- **Cloud and Artificial Intelligence**: Learn how these technologies work and can be leveraged.

Set Up a Home Lab

A great way to start learning is to set up a lab at home so you can start interacting with and discovering how these different technologies work. A lab is a collection of computers, devices, and applications you interact with to learn on your own. A lab can be something you physically set up at home or virtual labs you configure in the Cloud, such as Amazon's AWS or Microsoft's Azure. The best part of a lab is that you can make mistakes. When you are all done you simply rebuild the applications or systems and start all over again. There is even a term for this approach called *Fail Fast*. The sooner you make mistakes, the faster you learn and achieve your desired goals. There is no right or wrong way to start; just start playing with the technologies that interest you the most.

Network With, learn from and Talk to Others

The best way to gauge whether you want to pursue something is by talking to people doing the jobs that interest you. Ask for a few minutes of their time, be curious, ask questions, and for advice. A great place to meet cybersecurity professionals is a local cybersecurity conference, a professional organization event, or a meetup near you or a virtual conference (often called a 'con') such as Bsides or SANS New2Cyber. The hardest part is finding that first event or meetup. Once you attend one, connect with other attendees and grow your professional network. Other options for learning cybersecurity include YouTube videos, listening to podcasts, joining online community forums, cybersecurity scholarships or participating in online Capture-the-Flag (CTF) events.

Regardless of your background or degree, you bring unique skills and experiences that cybersecurity desperately needs!

Guest Editor

Tara N. Lewis, Ed.D. is a Certified Career Coach working with early career and career transition clients in IT and Cybersecurity. She has been active in national and local professional organizations, including WiCys, NACE, and TxCEIA and has presented in webinars, at national and regional conferences, and published articles related to career development.

Resources

SANS Scholarship Academies: https://www.sans.org/cyber-academy/
SANS Summits: https://sans.org/summits
Security Besides Conferences: http://www.securitybsides.com/
Women In Cybersecurity: https://www.wicys.org/