

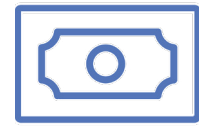
# Are You a High School Student? Here's Why You Should Consider a Career in Computer Science, Cybersecurity, or Networking!

**Who created the app you use every day? Who makes sure google searches find relevant answers to our questions? Who are the teams of people who help influencers get their content to you and their followers?**

Those people could be YOU. And it all starts with an education and a career in computer science, cybersecurity, or networking!

**If you're curious about exploring computer science, cybersecurity, or networking as a career but do not know where to start, this introductory resource can help.** With this resource you can learn about each career field, common day-to-day tasks, and how to get started and succeed.

# A Career in Computer Science, Cybersecurity, or Networking Means:



## Higher pay:

These careers pay very well! The median salary for computer science jobs is over \$90,000 per year. <sup>1</sup>



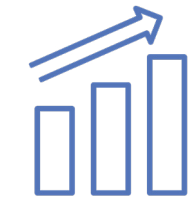
## Flexibility:

Opportunities for flexible hours and/or remote work-from-home options for a positive work/life balance.



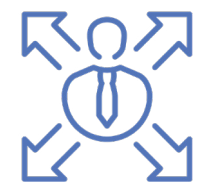
## Many job opportunities:

Computing fields are expected to grow 13 percent, adding 667,600 jobs between 2020 and 2030, showing the need for more students and workers in the future. <sup>2</sup>



## Opportunities for advancement:

Many people entering their careers can advance as they develop skills and continue their education.



## Diverse job opportunities, not just in tech:

In a tech-dependent world, companies are looking for computing professionals across all industries including health care, finance, education, art, environmental protection, entertainment, and humanitarian relief.



## Space for innovation and creativity:

Your creativity can help solve modern day technology challenges like how to make a website user friendly, how to protect customer information, and how to design new applications.





# What Does a Career in Computer Science, Cybersecurity, or Networking Look Like?

*Which Field Is Right for You?*

	COMPUTER SCIENCE	CYBERSECURITY	COMPUTER NETWORKING
<b>If you like to...</b>	Use creativity to solve challenges	Solve new and unique puzzles	Take things apart to understand how they work
<b>Then you might enjoy...</b>	Developing apps and software to solve technology challenges within a company	Setting up security solutions to protect the systems, programs, and data of companies and organizations	Managing the devices and computers an organization uses to run their business
<b>Sample Job Titles and Pay</b> To learn more about these specific jobs, <a href="#">click here.</a>	Software Developer (\$110,140/year)  Web Developer (\$77,200/year)	Information Security Analyst (\$103,590/year)  Vulnerability Analyst (\$92,870/year)	Network Support Specialist (\$65,450/year)  Network Systems Administrator (\$84,810/year)

# Industry Overview and Example Job Responsibilities

## Computer Science: Creating Technology to Solve Problems

Computer science is about *designing and developing computing systems* to solve complex problems by telling computers what we want them to do and how they should do it.<sup>3</sup>

This field *uses the power of computers to make improvements* in business, health care, retail, and many other industries.

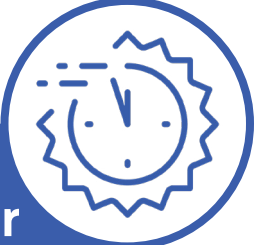
Computer science professionals are likely to work in *software development, computer programming, database design, and web design*—with many professionals writing code quite frequently.

## Cybersecurity: Protecting Information on Computers

Cybersecurity is the *practice of protecting networks, systems, programs, and data* from criminal or unauthorized use.<sup>4</sup>

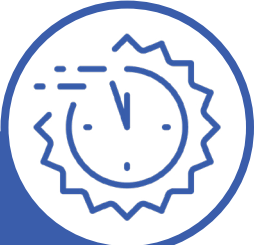
Cybersecurity professionals work to *prevent hackers from accessing important information*. Hackers use cyberattacks to:

- Access, change, or destroy important information
- Take money from users
- Interfere with company operations



On a typical day, computer science professionals may work with a team to:

- Resolve a glitch in a new piece of software
- Test new computer programs
- Collaborate with other IT professionals to improve computer systems



On a typical day, cybersecurity professionals may work with a team to:

- Install security solutions
- Teach clients how to keep their computers safe
- Learn about new digital threats to continuously keep companies secure

With increasing cyberattacks, careers in cybersecurity are continually growing. *Today, the world needs 1.8 million qualified cybersecurity professionals* to protect computers and networks.<sup>5</sup>

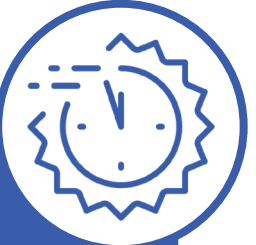
## Computer Networking: Monitoring Computer Connection Systems

A *computer network is the equipment (hardware and software) required to allow individuals, computers, and devices to share information* with each other.

*The best-known computer network is the internet!* Other examples can include a small connection between two offices or a large telecommunications system such as AT&T.

Professionals in computer networking are responsible for keeping a network up and running—which is why it is an important, well-paying role across many industries.

THE WORLD NEEDS  
**1.8 MILLION**  
QUALIFIED CYBERSECURITY  
PROFESSIONALS



On a typical day, computer networking professionals may work with a team to:

- Upgrade computer equipment for a business
- Back up computer files and data
- Provide support to network users

## Start Preparing for Your Career

If you would like to explore a career in computer science, cybersecurity, or computer networking, below are three easy ways to start:

- 1 Build your skills with computer programming apps:



[Alice](#) is a programming environment that makes it easy to create animations, build interactive narratives, or program simple games in 3D.



[Codecademy](#) is an online platform that offers free coding classes in 12 different programming languages.



[freeCodeCamp](#) is a community that can help you learn to code by completing challenges and building projects and earn verified certifications.



[CyberStart America](#) is a cybersecurity training game for high school students with over 200 fun-to-play challenges.



[Cisco Packet Tracer](#) is an interactive way to gain real skills and practice networking—no hardware required!

- 2 Ask your teacher or counselor about what classes are available at your school to learn about computer science, cybersecurity, or networking. Also, start to have conversations about future education and career opportunities.
- 3 Join a computing or technology club at your school or in your community—or start one!



## ENDNOTES

- 1 “Information Security Analysts,” Occupational Outlook Handbook, U.S. Bureau of Labor Statistics, last modified April 18, 2022, <https://www.bls.gov/ooh/computer-and-information-technology/information-security-analysts.htm>.
- 2 “Computer and Information Technology Occupations,” Occupational Outlook Handbook, U.S. Bureau of Labor Statistics, last modified April 18, 2022, <https://www.bls.gov/ooh/computer-and-information-technology/home.htm>.
- 3 Jim Stanton and Farzeen Harunani, eds., *K-12 Computer Science Curriculum Guide* (Waltham, Massachusetts: EDC, 2017), <https://www.edc.org/sites/default/files/uploads/CurriculumGuide-web.pdf>.
- 4 “What Is Cybersecurity?” Security, Cisco, accessed June 27, 2022, <https://www.cisco.com/c/en/us/products/security/what-is-cybersecurity.html#-related-topics>.
- 5 *2017 Global Information Security Workforce Study: Benchmarking Workforce Capacity and Response to Cyber Risk* (San Antonio, Texas: Frost & Sullivan, 2017), <https://www.isc2.org/-/media/B7E003F79E1D4043A0E74A57D5B6F33E.ashx>.

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**50 Milk St., 17th Floor, Boston, MA 02109**  
122 C St., NW, Suite 280, Washington, DC 20001  
505 14th St., Suite 340, Oakland, CA 94612  
**TEL** 617.728.4446 **WEB** [www.jff.org](http://www.jff.org)