

Careers in Cybersecurity



What do you know?

2020



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Did You Know? ²

Parents are the No.1 influence on their children's subject choices and early career decisions.



Parents can you answer these questions?

- **What Is cybersecurity?**
- Is the **cybersecurity** field growing how quickly?
- What Type of Jobs are available in **cybersecurity**?
- What does the career path look like?
- Do you need a degree to begin your cybersecurity career?
- Is the field just for computer science graduates and coders?
- Can you begin your education without any prior computing expertise?
- What's the earning potential of **cybersecurity** professional?
- What's the unemployment rate in the **cybersecurity** field?

If you're a parent and can't answer these questions, your children might miss out on a career in one of the fastest growing markets.



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Research Shows:

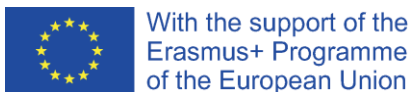
- Parents play a crucial role in student's decision-making about further education and careers.
- Parents can unintentionally pass on their own biases about subjects and careers.
- Even though ICT remains one of the top career choices that parents would make for their children, many parents have very little idea about the lucrative area of **cybersecurity**.
- 72% of parents have never considered **cybersecurity** as a future career for their children, which is potentially contributing to the growing **cyber skills gap** (Hardaker, A. 2019).



Don't feel guilty!

- Not knowing about **cybersecurity careers** is not something you should feel guilty about - it's a relatively new industry.
- Research from global Information and communications technology (ICT) security training company SANS Institute, across seven countries in the Middle East and Europe shows:
- A majority of parents don't know how to advise their children on a career in **cybersecurity**.
- Almost 70% of parents said they believed that **cybersecurity** is taught in some form at school.

Source: <https://www.sans.org/press/announcement/2019/06/20/1>



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Let's answer
some of your
questions.

What Is Cybersecurity?

- **Cybersecurity** is the process of securing and protecting computer systems and networks, from theft or damage to hardware, software, or electronic data, as well as protection from the disruption or misdirection of services.



Is the cybersecurity field growing ... how quickly?

- There has never been a better time to have a career in **cybersecurity**.
- Not that long ago, ICT was the most in-demand career, and a **cybersecurity** career path was almost unheard of.
- Today **cybersecurity may be the fastest-growing career field**.
- An estimated **3.5 million cybersecurity** jobs will be available but unfilled by 2021.
- With the rapidly changing nature of the domain, career pathways and required training must be reviewed and updated regularly.



What does the career path look like?

- There is not one linear path to a successful career in **cybersecurity**.
- Some people enter the field straight out of college, while others transition from another ICT role.
- All **cybersecurity** careers begin with general ICT experience.
- You need to understand how technology works before you can learn how to secure and protect it.
- The rapidly changing nature of the field requires **cybersecurity** specialists to commit to continuous professional development.



Do you need a cybersecurity degree to begin your career?

- Using job posting analysis software to examine more than 143,000 cybersecurity job postings in 2018 the data showed 93% of job postings called for candidates with at least a Bachelor's degree. (Styler, K.2019).

In a survey conducted in January 2019, including 39 professionals actively working in cybersecurity positions, 36% stated that earning a college degree was the strongest contributing factor for them entering the field. (Carnegie Mellon Software Engineering Institute Survey,2019)



Do you need a cybersecurity degree to begin your career? Part 2

- **Job opportunities typically increase with education level.**
- Having recognised industry certifications on your CV will help you build credibility as you climb the career ladder.
- **35% of cybersecurity jobs call for an industry certification, compared to 23% of IT jobs overall.**
- Another way of entering the **cybersecurity** career field is through up-skilling and/or cross-skilling. This includes those who have worked in ICT or that may have a tech background.



Is the field just for computer science graduates & coders?

As with other professions, **cybersecurity** has many specialty areas.

Some examples include:

- Security Sales Account Manager
- Cybersecurity Recruiter
- Cybersecurity Lawyer
- Cyber Insurance Specialist
- Security Awareness Trainer Security
- Call Center Operator



Can you begin your education without any prior computing expertise?

- Yes!
- For technical roles, the key is not a technical background, but your willingness and **desire to learn how technology works**.
- Plus, a growing number of roles in the **cybersecurity** field focus on solving human-related risks rather than technical ones. These require softer skills, such as privacy, security awareness and training, governance, security communications, or cyber law and ethics rather than technical expertise.
- Take time to understand all the different options. Let your interests will guide your path.
- There are many free security courses and training opportunities online for you to explore, from Universities like Stanford and MIT and Udemy.

What's the earning potential of a cybersecurity professional?


- A typical starting salary for a cybersecurity analyst is €21,000.
- According to Glassdoor, the average salary for a cybersecurity specialist in the UK is £33,620 or €38,180.
- Salaries typically don't fall below €30,000, and can often be well in excess of €100,000.



What's the unemployment rate in the cybersecurity field?

- Unemployment in the field is currently at a stunning 0%.
- According to Cybersecurity Ventures CEO Steve Morgan, “Anyone with cybersecurity experience can find immediate employment.”
- “There may be a small percentage of the cyber workforce who are in between jobs, some who have resigned to pursue new opportunities, and others who are unrealistic about which positions they qualify for (and the compensation commensurate with their experience)—but there’s a job available for everyone with cybersecurity experience.” (Gelber, M.2020).





Who might be a
good fit for a
Cybersecurity
career?

Who should consider a cybersecurity career?

Almost everyone can be part of the continued technical revolution and secure a well-paying and engaging career in technology.

Today the choice is not **if** you can be in the tech industry, but **where** and at **what level** in the industry you want to be and how to get there?

Unlike before, when only the most highly trained and educated could even think of entering the computing field, these days you can choose your education level, and choose or change your position as you wish by advancing your education.



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Is your teenager curious, creative, are they good with words, do they love solving problems?

- Proficiency and expertise in cybersecurity is often determined by an inquisitive nature, problem solving skills, technical aptitude, and an ability to understand the interdependencies of people, systems, and applications.
- If your teenager is open to cyber — but not necessarily coding or computer science — then talk to them about careers in cybercrime investigation, forensics, or even sales and marketing.
- There's something for everyone in the cybersecurity field.



Key skills/traits for a career in Cybersecurity .

Critical thinking	Communication (Verbal & written)
Problem Solving	Persistent, determined
Flexible/creative	Works well under pressure
Collaborative, team player	Curious and perceptive
Continual learner	Technology/tech trend fan
A sense of duty, justice	Gaming fan



What Types of Jobs are Available in the Cybersecurity field?





COMPUTER FORENSICS ANALYST

- Gather evidence for legal cases.
- Provide training on strategies in computer evidence.
- Rebuild networks and software systems to recover lost and/or damaged information.



CYBERSECURITY ENGINEER

- Requires strong technical, organizational and communication skills.
- Develop and implement secure network solutions
- Engineer/develop trusted systems into secure systems.



CYBERSECURITY AUDITOR

- Usually working as external consultants.
- Create and execute audits based on organizational policies and governmental regulations.
- Develop tests of ICT systems to identify risks and inadequacies.
- Offer suggestions for improvement.



CYBER INTELLIGENCE ANALYST

- Collect information about Internet-based malware-related criminal activities and the people behind them.
- Make predictions about cyber criminals and their future activities.
- Create threat reports with the results of the analyses.



ETHICAL HACKER

(ALSO KNOWN AS A WHITE-HAT HACKER)

- Find and exploit vulnerabilities and weaknesses in various systems.
- Break into systems legally and ethically.
- Find vulnerabilities and fix them before the bad guys (Black-Hat Hackers) can break in.



CHIEF INFORMATION SECURITY OFFICER - CISO

- C-level management executive.
- Oversee the operations of an organization's ICT security department and related staff.
- Develop secure business policies and practices.



RISK & COMPLIANCE CONSULTANT

- Identify, assess and monitor risks
- Ensure that corporate policies adhere to governmental regulations.
- Ensure that internal controls are functional and adequate.



PRE-SALES CYBERSECURITY ENGINEER

- Collaborate with sales, service, engineering, and technical support to ensure proposed products include technical solutions that accurately address customer needs.
- Have a strong mix of technical aptitude, business acumen, salesmanship and communication skills (written and verbal).



CYBERSECURITY ARCHITECT

- Combines hardware and software knowledge with programming proficiency, research skills, and policy development.
- Assess ICT and computer systems, identifying strengths and weaknesses.
- Plan, implement, and supervise computer and network security systems.



SECURITY OPERATION CENTER (SOC) ANALYST

- Works as part of a team to monitor and fight threats to an organization's ICT infrastructure.
- Provides threat and vulnerability analyses.
- Provides analysis of security log data and Incident Response (IR) support.

Non-technical cybersecurity jobs.

- **Security Sales Account Manager.**
- **Security Awareness Trainer.**
- **Security Call Center Operator.**
- **Cybersecurity Recruiter.**
- **Cybersecurity Lawyer.**
- **Cyber Insurance Specialist.**





The 5 Biggest Cybersecurity Trends In 2020 Everyone Should Know About.

Cybersecurity Trends In 2020

- The cybersecurity skills gap continues to grow.
- Artificial intelligence (AI) will play an increasing role in both cyber-attack and defence.
- Political and economic divisions between east and west lead to increased security threats.
- Political interference increasingly common and increasingly sophisticated.
- Vehicle hacking and data theft increases.



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