



Cyber Security Career for Children PT.1

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ABOUT

- PDF created for parents to direct their children to an area that has growth potential for years to come
- PDF criado para os pais encaminharem seus filhos para uma área que tem potencial de crescimento por longos anos



What is Cyber Security?

Cybersecurity is the practice of protecting critical systems and sensitive information from digital attacks. Also known as information technology (IT) security, cybersecurity measures are designed to combat threats against networked systems and applications, whether those threats originate from inside or outside of an organization.



O que é cibersegurança?

A cibersegurança é a prática de proteger sistemas críticos e informações confidenciais de ataques digitais. Também conhecidas como segurança de tecnologia da informação (TI), as medidas de segurança cibernética são projetadas para combater ameaças contra sistemas e aplicativos em rede, sejam essas ameaças originadas de dentro ou de fora de uma organização.

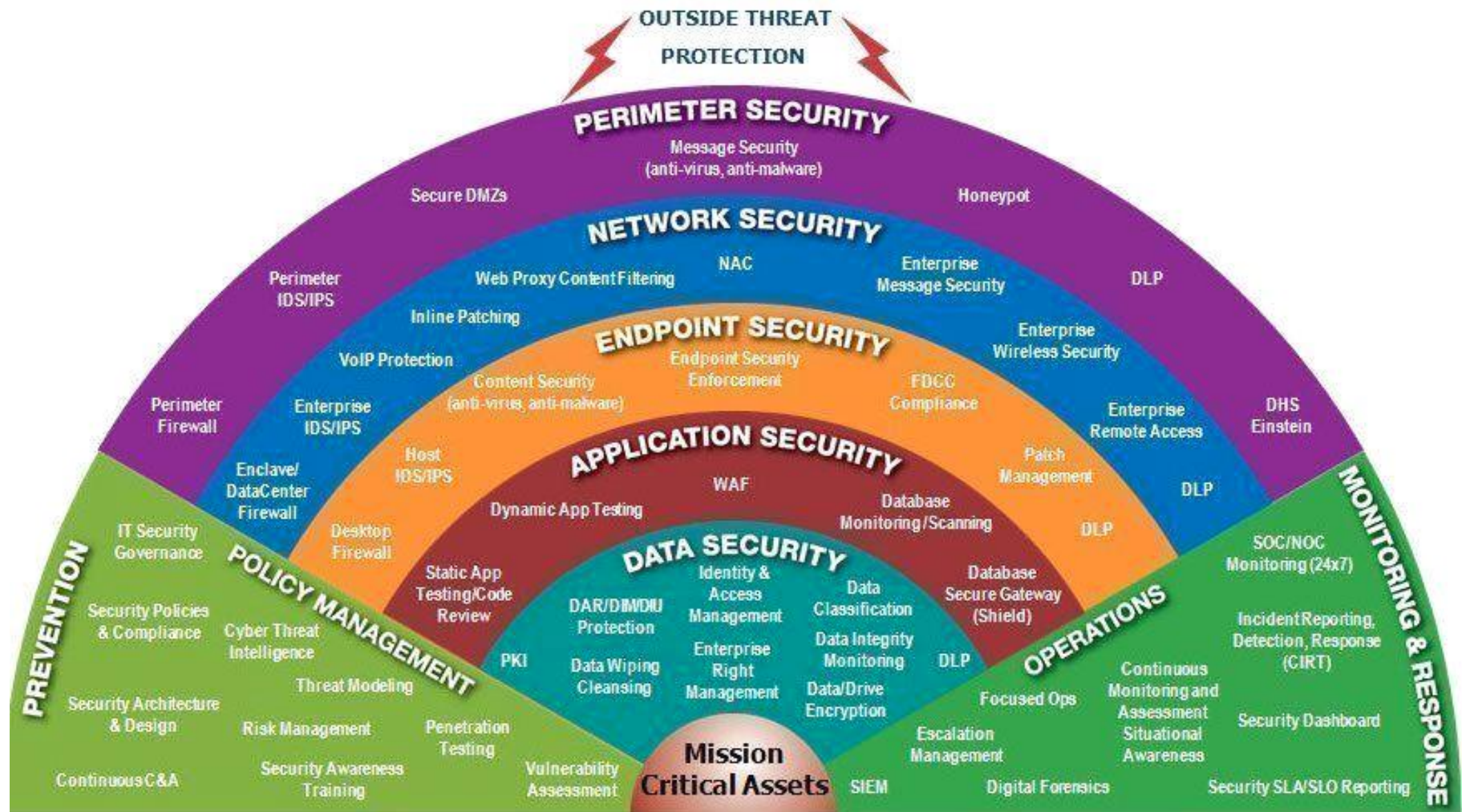


Types of Cyber Security



Types of Cybersecurity





<https://blog.twinstate.com/cybersecurity/defense-in-depth-explained> (Utilize o Google Tradutor)

INFOSEC WHEEL



Colors in Cyber Security



YELLOW TEAM

- ✓ Software Builders
- ✓ Application Developers
- ✓ Software Engineers
- ✓ System Architects



ORANGE TEAM

- ✓ Inspire coders and architects to be more security conscious
- ✓ Benefit from current exposure to evolving security threats
- ✓ Offensive critical thinking included in builder's intrinsic thought pattern
- ✓ Decrease in overall security bug count over time



RED TEAM

- ✓ Offensive Security
- ✓ Ethical Hacking
- ✓ Exploiting vulnerabilities
- ✓ Penetration Tests
- ✓ Black Box Testing
- ✓ Social Engineering
- ✓ Web App Scanning





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PURPLE TEAM

- ✓ Facilitate improvements in detection and defence
- ✓ Sharpened the skills of Blue and Red team members
- ✓ Effective for spot-checking systems in larger organizations



BLUE TEAM

- ✓ Defensive Security
- ✓ Infrastructure protection
- ✓ Damage Control
- ✓ Incident Response(IR)
- ✓ Operational Security
- ✓ Threat Hunters
- ✓ Digital Forensics





YELLOW TEAM

- ✓ Software Builders
- ✓ Application Developers
- ✓ Software Engineers
- ✓ System Architects



GREEN TEAM

- ✓ Improved logging capability, working to standardise and prioritise important events
- ✓ Better data for digital forensics and incident response cases
- ✓ Safer Change Management including integrity monitoring
- ✓ Full coverage monitoring including improved Anti-Virus and End Point Protection on systems

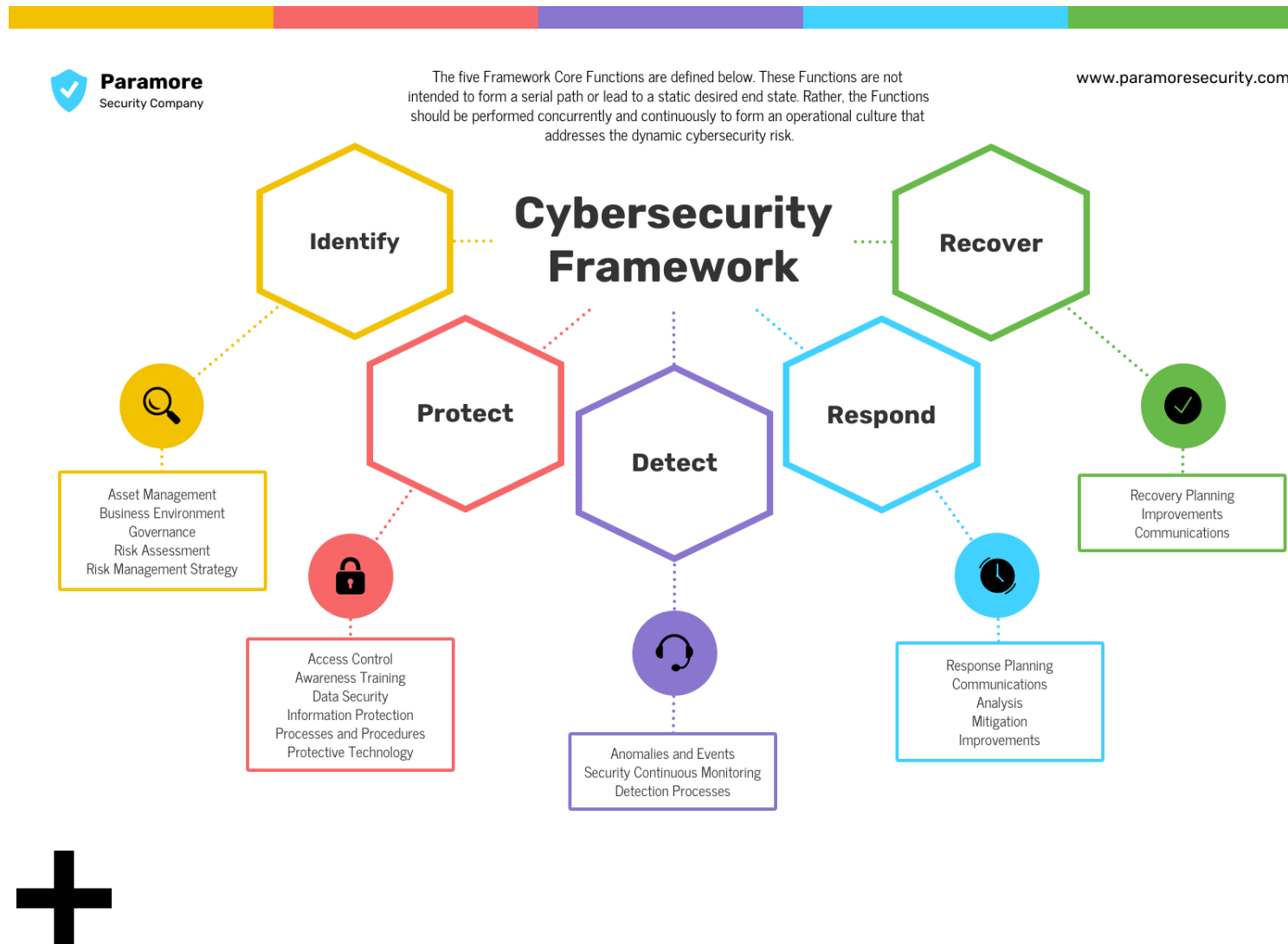


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Cyber Security Framework



SANS | **GIAC**
CERTIFICATIONS

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08

Security Architect & Engineer

Security Architect & Engineer is a highly specialized role that requires a deep understanding of network security and data protection. This role involves designing and implementing security architectures, policies, and procedures to protect an organization's information assets. Security Architects and Engineers work closely with other IT professionals to ensure that security measures are integrated into the organization's overall IT strategy.

Key Responsibilities:

- Design and implement security architectures, policies, and procedures.
- Conduct risk assessments and vulnerability scans.
- Monitor and analyze security logs and alerts.
- Respond to security incidents and breaches.
- Collaborate with other IT professionals to ensure security measures are integrated into the overall IT strategy.

Skills and Qualifications:

- Strong understanding of network security and data protection.
- Experience with security architectures, policies, and procedures.
- Proficiency in risk assessment and vulnerability scanning.
- Ability to monitor and analyze security logs and alerts.
- Strong communication and collaboration skills.

Recommended Courses Associated:

- Security Architect & Engineer
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Why is this role important?

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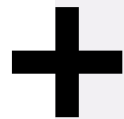
- Security Architect & Engineer
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*Course catalog alert. Learn more about the new courses at sams.org/new-sams-courses

https://assets.contentstack.io/v3/assets/blt36c2e63521272fdc/blt00e09df814b51cf8/60a3f1af11dac1533c75d229/Coolest_Careers_in_Cybersecurity.pdf

Career Development



Fundamentals

- Is enrolling your child in computer classes necessary? Yes, but think of classes that teach him the features of an operating system, how a computer network works and even how to perform maintenance on the machine itself.
- Matricular seu filho em aulas de informática é necessário? Sim, mas pense em aulas que ensinem ele as funcionalidades de um sistema operacional, como funciona uma rede de computador e até mesmo a realização de manutenções na própria máquina.
- Content like this can also be easily found on YouTube or by searching for courses like this on Udemy.
- Conteúdos assim, também podem ser facilmente achados no YouTube ou pesquisando por cursos do gênero na Udemy



Fundamentals - Computer Basics

- <https://www.udemy.com/course/computer-basics-2020-basic-computer-skills-and-fundamentals/>
- <https://www.udemy.com/course/computer-basics-for-the-simple-beginner/>
- <https://www.udemy.com/course/complete-computer-basics-course/>
- <https://www.udemy.com/course/computers/>
- <https://www.udemy.com/course/computer-fundamentals-u/>
- <https://www.udemy.com/course/curso-de-informatica-completo/>
- <https://www.udemy.com/course/informatica-profissionalizante-2020/>
- <https://www.udemy.com/course/curso-de-informatica-basica/>
- <https://www.udemy.com/course/frccursodemanutencao/>



Fundamentals – Network Computer

- <https://www.udemy.com/course/introduction-to-computer-networks/>
- <https://www.udemy.com/course/world-of-computer-networking/>
- <https://www.udemy.com/course/computer-networking-fundamentals-m/>
- <https://www.udemy.com/course/curso-completo-cisco-ccnav3-200-125/>
- <https://www.udemy.com/course/redes-tcpip/>
- <https://www.udemy.com/course/complete-computer-basics-course/>
- <https://www.udemy.com/course/concepts-of-computer-networks/>



Fundamentals – Operation System

- <https://www.udemy.com/course/operating-systems-from-scratch-part1/>
- <https://www.udemy.com/course/linux-operating-system-with-shell-from-scratch-for-beginners/>
- <https://www.udemy.com/course/it-operating-systems-comptia-a-plus-900/>
- <https://www.udemy.com/course/operating-system-concepts/>
- <https://www.udemy.com/course/computer-engineering-it-operating-system-and-more/>
- <https://www.udemy.com/course/lpi-linux-essentials/>
- <https://www.udemy.com/course/windows-server-2019-1/>



Details

- These are some courses on Udemy that you can enroll your child to study, they will help a lot, even if he doesn't understand 100% at first, in the course of his journey he will get such knowledge when he comes across other content
- Esses são alguns cursos na Udemy que você pode matricular seu filho para ir estudando, vão ajudar bastante, mesmo que ele não entenda 100% no começo, no decorrer da sua jornada ele vai obtendo tais conhecimentos quando se depara com outros conteúdos
- Don't forget to give your child a dose of the fundamentals, that's the basics of our day to day. Upon waking up, we turn on a computer, how does it work? How does he call? After that it returns us a system, how does this system work? And finally, we browse the internet, and how do we connect with a computer on the other side of the world?
- Não esqueça de dar seu filho uma dose dos fundamentos, esse é o básico do nosso dia a dia. Ao acordar, ligamos um computador, como ele funciona? Como ele liga? Depois disso, ele nos retorna um sistema, como esse sistema funciona? E por último, navegamos na internet, e como conseguimos nos conectar com um computador do outro lado do mundo?
- When he understands that, he can go to the next step.
- Quando ele entender isso, já pode ir para próxima etapa



Skills in Cyber Security

- Where to start his career?
- I particularly taught children and teenagers from 10 to 17 years old and the ease with technology is absurd. And for some parents I set up a career plan to prepare for the market. But I left something more open, after all we don't know if he wants to become a DevSecOps professional or a Red Team
- Por onde começar a carreira dele?
- Eu particularmente dei aula para crianças e adolescentes dos 10 a 17 anos e a facilidade com a tecnologia é absurda. E para alguns pais eu montei um plano de carreira para se preparem pro mercado. Porém eu deixei algo mais aberto, afinal não sabemos se ele deseja se tornar um profissional de DevSecOps ou um Red Team

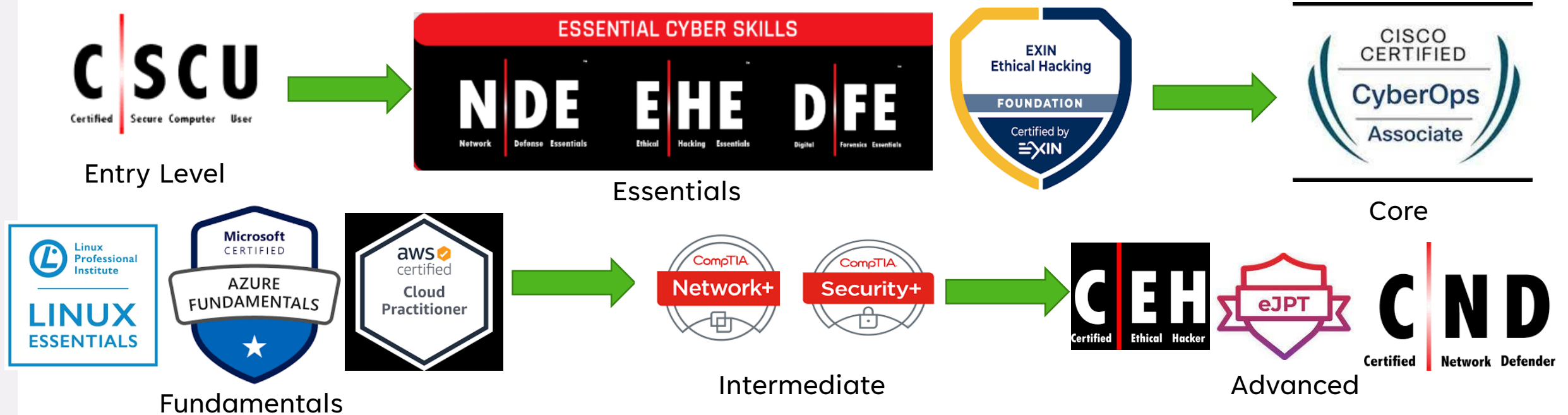


Skills in Cyber Security 2

- That's why I'm going to put generic points so that he starts entering this cybersecurity world. And especially certifications to develop your curriculum from an early age
- Por isso, vou colocar pontos genéricos para que ele comece entrando nesse mundo de cibersegurança. E principalmente certificações para desenvolver o seu currículo desde cedo



Certifications



+ Note: The certification rankings are different, I've put them in an order of difficulty, price and development time, it doesn't mean that these can be the path your child should follow, but rather an example of what they need to go.

Observação: Os rankings de certificação são diferentes, eu coloquei em uma ordem de dificuldade, preço e tempo de desenvolvimento, não significa que essas possa ser a trilha que seu filho deva seguir, mas sim um exemplo do que ele precisa percorrer.

Explaining Certifications

- The certifications were divided by levels, from fundamentals to advanced, if you are starting now, these certifications mostly do not require previous experience in the area or a minimum age, except for some such as CEH that are already in a more advanced layer and require 18 years. for example.
- As certificações elas foram divididas por níveis, desde fundamentos a avançado, se você está começando agora, essas certificações na maioria não exigem experiência prévia na área e nem uma idade mínima, tirando algumas como CEH que já estão numa camada mais avançada e requer 18 anos por exemplo.



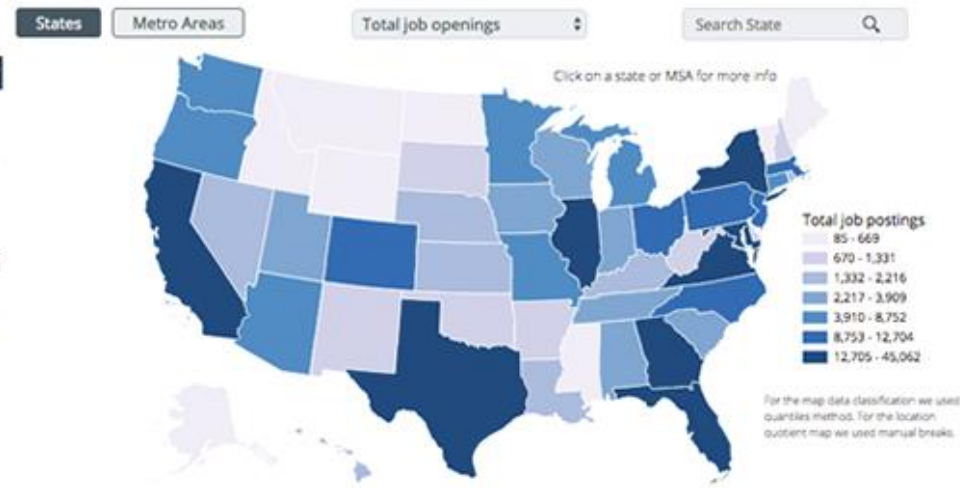
Cyber Security Demand

- This is the only map of vacancies in the United States!
- But it already shows how much information security professionals are needed.
- Esse é o mapa apenas de vagas nos estados unidos!
- Mas já mostra o quanto é necessário profissionais de segurança da informação.

Cybersecurity Supply/Demand Heat Map

Cybersecurity talent gaps exist across the country. Closing these gaps requires detailed knowledge of the cybersecurity workforce in your region. This interactive heat map provides a granular snapshot of demand and supply data for cybersecurity jobs at the state and metro area levels, and can be used to grasp the challenges and opportunities facing your local cybersecurity workforce.

Share



National level

TOTAL CYBERSECURITY JOB OPENINGS ⓘ
348,975

TOTAL EMPLOYED CYBERSECURITY WORKFORCE
778,402

SUPPLY OF CYBERSECURITY WORKERS ⓘ
Very Low
CYBERSECURITY WORKFORCE
SUPPLY/DEMAND RATIO

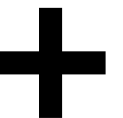


GEOGRAPHIC CONCENTRATION ⓘ
Average
LOCATION QUOTIENT



TOP CYBERSECURITY JOB TITLES ⓘ

- Cyber Security Analyst / Specialist
- Cyber Security Engineer
- Auditor
- Network Engineer / Architect
- Software Developer / Engineer
- Systems Engineer
- Systems Administrator
- Information Assurance Engineer / Analyst
- Risk Manager / Analyst



How can my child take advantage of this market now?

- In addition to receiving basic training and following a certification journey, like the one I left on the previous slides. Practicing in labs is essential, especially so that his skills continue to grow and he can face challenges, such as certification exams and future job interviews when his time comes. In addition to making good professional decisions. If possible, connect him to mentors who can help and seek professional training as well.
- Além de receber treinamentos básicos e seguir uma jornada de certificação, como a que deixei nos slides anterior. Praticar em laboratórios é fundamental, principalmente para que suas habilidades continue crescendo e ele possa encarar desafios, como as provas de certificações e futuramente entrevistas de emprego quando chegar sua hora. Além de tomar boas decisões profissionais. Se possível, conecte ele a mentores que possa ajudar e busque formações profissionais também.



Laboratory

- <https://tryhackme.com/>
- <https://www.hackthebox.eu/>
- <https://blueteamlabs.online/>
- <https://portswigger.net/web-security/dashboard>
- <https://ilabs.eccouncil.org/>



Cyber Security Platforms Study

<https://www.cybrary.it/>

<https://pt.coursera.org/>

<https://www.udemy.com/>

<https://offensive-security.com/>

<https://www.eccouncil.org/>

<https://comptia.org/>

<https://exin.com/>

<https://ine.com/>

<https://www.pentesteracademy.com/>



How to impact children?

- Impacting children is not an easy task, you need to present the benefits of this area, not only its importance, but the return it brings. To do this, try to understand this area as well if you want to talk to your child and invest in his career. I particularly notice many parents targeting this area for their children and always open to discussing with teachers which way is best to go. So seeking these guidelines will help your child a lot.
- Impactar as crianças não é uma tarefa fácil, você precisa apresentar os benefícios dessa área, não só sua importância, mas o retorno que ela traz. Para isso, busque entender essa área também se deseja falar com seu filho e investir na carreira dele. Eu particularmente noto muitos pais visando essa área para seus filhos e sempre abertos a discutir com os professores por qual caminho é bom seguir. Assim buscando essas orientações vai ajudar bastante seu filho.



Programming brings passion

- Programming brings passion for technology, so enrolling your children in technological development programs and even encouraging participation in hackathon, opens interest in technology and the desire to develop more in the area.
- I always introduce my students to the Python language and show its power, as it is a very simple language to work with.
- Programar traz paixão pela tecnologia, por isso, inscrever seus filhos em programas de desenvolvimento tecnológicos e até incentivar participação em hackathon, abre o interesse pela tecnologia e a vontade de se desenvolver mais na área.
- Apresento sempre aos meus alunos a linguagem Python e mostro seu poder, por ser uma linguagem bem simples de se trabalhar.



Talk to your child about career

- Talk to your son about his career in cybersecurity, see what he has to say and give the necessary support if necessary, sometimes it gets discouraged and I've seen students wanting to drop courses because they find it too difficult or because of some failure. But the role of parents and teachers is to create a generation that will fill this market deficit together.
- Converse com seu filho sobre sua carreira na área de cibersegurança, veja o que ele tem para falar e dê o apoio necessário caso seja preciso, as vezes desanima e já vi alunos querendo largar cursos por achar difícil demais ou por alguma reprovação. Mas o papel dos pais e dos professores é juntos criar uma geração que supra esse deficit no mercado.



Conclusion

- Obviously, this PDF has the purpose of helping and showing parents and teachers how much the Security area needs professionals, but that it has a path ahead. I started very early at 10 years old and it was difficult without any support, so I want to open everyone's mind and show how relevant many professions are and cybersecurity is one of them.
- Obviamente que esse PDF tem como propósito, ajudar e mostrar aos pais e professores a mostrar o quanto a área de Segurança precisa de profissionais, mas que tem uma trilha pela frente. Eu comecei bem cedo aos 10 anos e foi difícil sem apoio nenhum, por isso quero abrir a mente de todos e mostrar o quão relevante muitas profissões são e a área de cibersegurança é uma delas

