Cybersecurity Career Academy

Thomas Nudd
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- My Cybersecurity Career Path

- What is Cybersecurity?

- Business is Booming!

- What are the Different Roles?

- So you want to be a Cyber Pro?

- What are some resources to learn from?

- Ok, I have learned some things, how do I prove it?

- The Big Reveal!

Disclaimer – Slides contain my thoughts and opinions
based on my career experiences ☺

- BS – Marketing and International Business – UMaine
- Marketing Intern – Stonewall Kitchen
- Market Management – Liberty Mutual
- MBA – SNHU

------ Re-Org -------

- Cybersecurity Career Begins
- MS Information Assurance – Norwich University
- Vuln Management -> Log Management -> Incident Response -> SysAdmin -> Cybersecurity Engineer -> Building a SOC -> Director of Cybersecurity Engineering -> Director of Cloud Security Engineering -> CISO USNH.

"Cybersecurity is the art of protecting networks, devices, and data from unauthorized access or criminal use and the practice of ensuring confidentiality, integrity, and availability of information." - CISA

Security Hacker:

https://en.wikipedia.org/wiki/Security_hacker

https://en.wikipedia.org/wiki/List_of_security_hacking_incidents

Computer Security:

https://en.wikipedia.org/wiki/Computer_security

Books:

Cult of the Dead Cow

Ghost In The Wires

The Cuckoos's Egg

The Fifth Domain

Counter Hack Reloaded

Business is Booming!

"Cybersecurity workers protect our most important and private information, from bank accounts to sensitive military communications."

National level

TOTAL CYBERSECURITY JOB OPENINGS ⓘ

464,420

TOTAL EMPLOYED CYBERSECURITY WORKFORCE ⓘ

956,341

New Hampshire

TOTAL CYBERSECURITY JOB OPENINGS ⓘ

1,075

TOTAL EMPLOYED CYBERSECURITY WORKFORCE ⓘ

2,999

Cyberseek Project supported by The National Initiative for Cybersecurity Education (NICE), led by the National Institute of Standards and Technology (NIST)

Granite State College
UNIVERSITY SYSTEM OF NEW HAMPSHIRE

Keene
STATE COLLEGE

Plymouth State
UNIVERSITY

University of
New Hampshire

- Cybersecurity Engineer
- Cybersecurity Risk Analyst
- Privacy Analyst / Engineer
- Cybersecurity Compliance Analyst
- Cybersecurity Incident Responder
- Cybersecurity Vulnerability Analyst
- Security Operations Center (SOC) Engineer / Blue Team
- Penetration Tester / Certified Ethical Hacker (CEH) / Red Team
- Cybersecurity Threat Analyst
- Cybersecurity Developer
- Cybersecurity Data Scientist
- Cybersecurity Leadership BISO / CISO / CSO

Key Traits I Look For When Hiring (In Priority Order)

Ability to lead complex initiatives and diverse groups of people

Ability to solve complex problems under pressure

Decisiveness

Ability to communicate clearly

Proactiveness and willingness to learn

Ability to work through adversity

Foundational technical skillset

Cybersecurity technical skillset

CIS - The Center for Internet Security is an independent, nonprofit organization with a mission to create confidence in the connected world.

- **CIS Top 20**
- **Hardening Templates**

NIST - The National Institute of Standards and Technology is a physical sciences laboratory and non-regulatory agency of the United States Department of Commerce.

- **NIST CSF**
- **NIST 800 - 53**

CISA - The Cybersecurity and Infrastructure Security Agency leads the Nation's strategic and unified work to strengthen the security, resilience, and workforce of the cyber ecosystem to protect critical services and American way of life.

- **Referential Guidance**

OWASP - The Open Web Application Security Project (OWASP) is a nonprofit foundation that works to improve the security of software.

- **OWASP Top 10**

CSA - The Cloud Security Alliance is the world's leading organization dedicated to defining and raising awareness of best practices to help ensure a secure cloud computing environment.

- **White Papers and Referential Guidance**

SANS Institute – The SysAdmin, Audit, Network, and Security Institute offers comprehensive, intensive training designed to help anyone, from auditors to CIOs to defend systems and networks against the most dangerous threats.

- **Internet Storm Center**
- **Reading Room**

Private Tech Industry – Microsoft, Amazon, Verizon, Google, Cisco, VMware, IBM

- **Published white papers, reference architectures, comprehensive documentation, RTFM.**

Cybersecurity News Outlets – Krebs, IT Security Guru, Security Weekly, Hacker News, Blogs

Free Tools and YouTube – Download them, Watch and Learn!
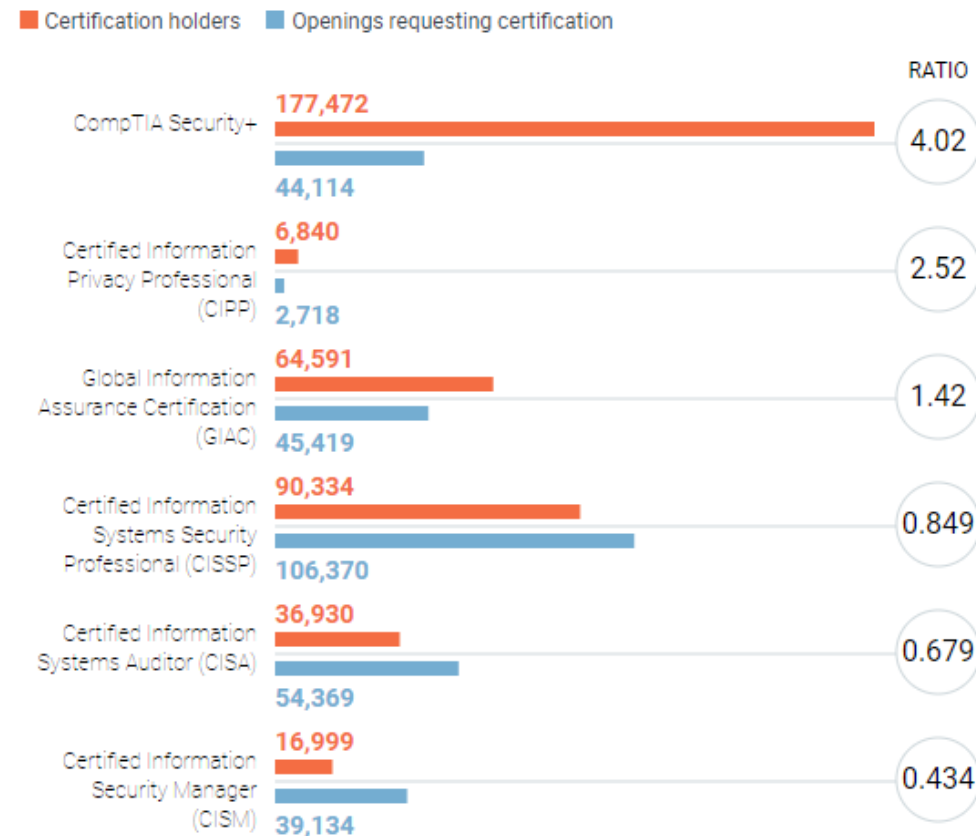
Be Proactive and APPLY THY KNOWLEDGE

- Projects
- Labs
- Personal Life
- @Work

Certifications

- SANS
- ISC^2
- CSA
- CEH
- ISACA
- CompTIA

Higher Education

CERTIFICATION HOLDERS / OPENINGS REQUESTING CERTIFICATION

- Certification holders
- Openings requesting certification

RATIO

Certification	Certification holders	Openings requesting certification	Ratio
CompTIA Security+	177,472	44,114	4.02
Certified Information Privacy Professional (CIPP)	6,840	2,718	2.52
Global Information Assurance Certification (GIAC)	64,591	45,419	1.42
Certified Information Systems Security Professional (CISSP)	90,334	106,370	0.849
Certified Information Systems Auditor (CISA)	36,930	54,369	0.679
Certified Information Security Manager (CISM)	16,999	39,134	0.434

You Already Are A Cybersecurity Professional.

You Are Our First Line of Defense.

Thank you!