



Careers in Cybersecurity:

The jobs you never knew you wanted

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 malware researcher @Lookout

 Mobile AppSec @Shopify

 McGill CS, 2012

 MSc. Information Security Eng. '21

 Infosec blogger @chmodx

 LinkedIn Learning Instructor

 cat lady



What is Cybersecurity?

What is Cybersecurity?

cybersecurity or cy·ber se·cu·ri·ty

[sah-y-ber-si-kyoor-i-tee] [SHOW IPA](#) 🔊

noun

- 1 precautions taken to guard against crime that involves the Internet, especially unauthorized access to computer systems and data connected to the Internet.
- 2 the state of being protected against such crime.

<https://dictionary.com>



What is Cybersecurity?



What is Cybersecurity?





Why consider a career in
#infosec

...there will be as many as **3.5 million unfilled positions** in the industry by 2021

<https://www.forbes.com/sites/forbestechcouncil/2018/08/09/the-cybersecurity-talent-gap-is-an-industry-crisis/#63f609a8a6b3>

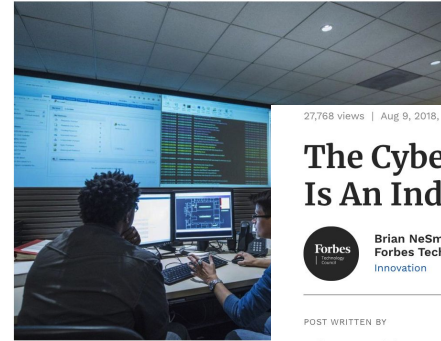
21,471 views | Oct 9, 2018, 09:14am

Cybersecurity: Not Just "A" Job – Many Jobs Of The Future



Taylor Armerding Former Contributor @
Cybersecurity
I cover software security and privacy.

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Cybersecurity will create millions of new jobs in the future society... [+] CREDIT: GETTY IMAGES

27,768 views | Aug 9, 2018, 07:30am

The Cybersecurity Talent Gap Is An Industry Crisis



Brian NeSmith Forbes Councils Member
Forbes Technology Council COUNCIL POST | Paid Program
Innovation

POST WRITTEN BY

Brian NeSmith

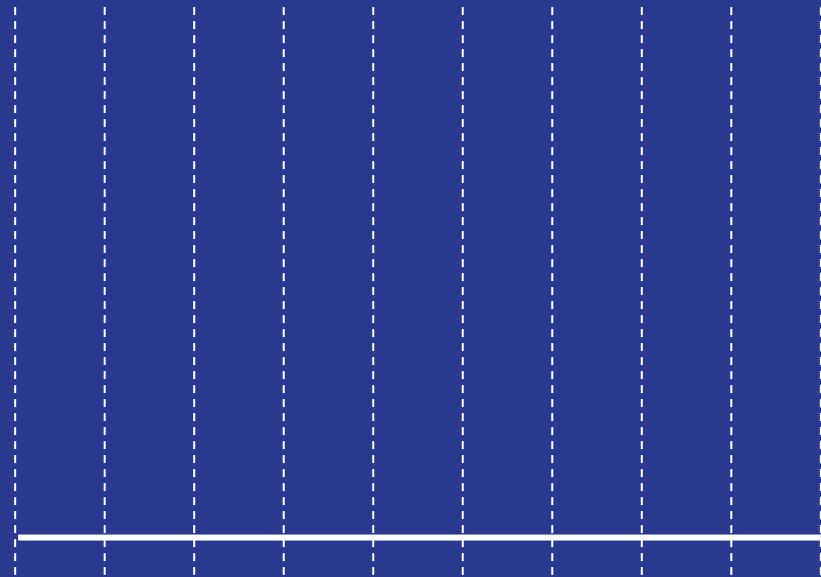
Brian NeSmith is the CEO and Co-Founder of **Arctic Wolf Networks**, a leading SOC-as-a-service company, based in Sunnyvale, CA.



Shutterstock

0% Unemployment Rate

<https://www.monster.com/career-advice/article/tech-cybersecurity-zero-percent-unemployment-1016>



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<https://sarahcandersen.com>

Entry-level pay is about \$10,000 USD better than the national median salary...Those who reach the C suite are getting into the \$500,000 USD range.

<https://www.forbes.com/sites/taylorarmerding/2018/10/09/cybersecurity-not-just-a-job-many-jobs-of-the-future/#6335f2163f2b>

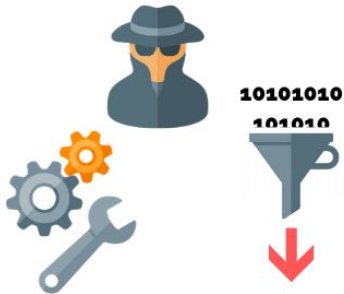
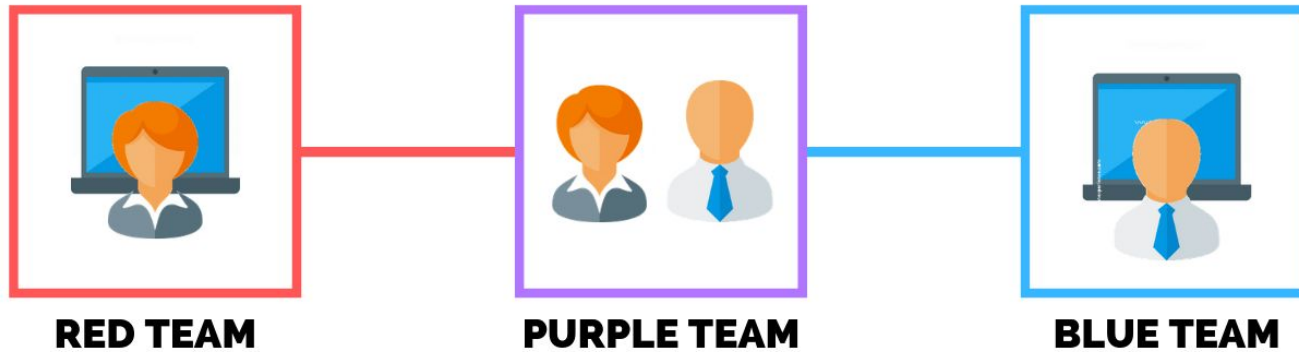


Cybersecurity Career Options

Possible Careers

- ★ Pentesting
 - ★ Incident Response
 - ★ Malware Analysis
 - ★ Application Security
 - ★ Network Security Engineering
 - ★ Digital Forensics
 - ★ Information Security Analysis
-

red vs blue + Purple



This diagram, and more great information @ <https://purplesec.us/red-team-vs-blue-team-cyber-security/>

Many cybersecurity professionals jumped around a bit between the different areas until they found something that suited their interests and skills.

What to Expect

What to Expect

Never-ending problem solving.

A fast-moving industry: constant professional development

Can sometimes mean overtime, high-stress situations

Trying to outsmart the bad guys!





How You Can Get Started

Learn, Learn, Learn

HackerSploit pentesting videos: <https://www.youtube.com/channel/UC0ZTPkdxIAKf-V33tgXwi3Q>

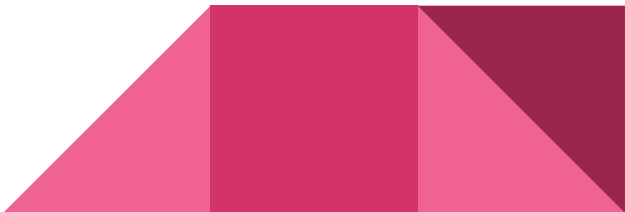
LiveOverflow misc. Cybersecurity topics: <https://www.youtube.com/channel/UCIcE-kVhgyiHCcjYwcpfj9w>

Maddie Stone's (@maddiestone) Android RE Tutorial: <https://maddiestone.github.io/AndroidAppRE/>

Amanda Rousseau's (@malwareunicorn) PC Malware Tutorial: <https://malwareunicorn.org/#/workshops>

Azeria's (@ma_zer_ia) Assembly tutorials (great for learning low-level stuff!): <https://azeria-labs.com/>

My Android Malware Analysis videos: <https://www.youtube.com/c/chmodx>



Practice, Practice, Practice

Super vulnerable web app from Google to teach you the basics of web pentesting:

<https://google-gruyere.appspot.com/>

Hacker0x01's Hacking 101 tutorial for getting started with Bug Bounties:

<https://www.hackerone.com/hacker101>



Bug Bounty Programs

hackerone
bugcrowd



CTF / Capture the Flag Events



Attempting to hack or ‘crack’ vulnerable applications (web, mobile, software, binary files, etc.) for “flags” or strings in order to gain points for your team.

- ★ Penetration Testing
- ★ Reverse Engineering
- ★ Cryptography
- ★ Forensics
- ★ Packet (Network) Analysis

Check out LiveOverflow’s YouTube video on CTFs, too:

<https://www.youtube.com/watch?v=8ev9ZX9J45A&vl=en>

CTF / Capture the Flag Events

At Conferences

NorthSec

(<https://nsec.io/>)

HackFest (<https://hackfest.ca/>)

BSides Conferences
(Ottawa, Toronto)

(<http://www.securitybsides.com/>)

Company-Hosted

Google

(<https://capturetheflag.withgoogle.com/>)

FireEye FlareOn

(<http://flare-on.com/>)

Square

(<https://squarectf.com/>)

TrendMicro

(https://www.trendmicro.com/en_us/campaigns/capture-the-flag.html/)

Anytime Online

Root Me


(<https://www.root-me.org/>)

CTF Time

(<https://ctftime.org/>)



Find a Mentor / Network

- ★ Many cybersecurity professionals were in the same boat: graduating with little exposure to security topics in their undergrad program.
 - ★ Reach out to people whose work you admire through Twitter, email, their blog, etc. Most will be happy to chat or give advice / guidance
 - ★ Attend conferences, meet-ups and events & build your network. Meetups, conferences, student groups all provide ways to network. Conferences can be expensive but volunteering gets you free access and more face time with speakers and organizers. This is easily the *best* way to find mentorship, and even career prospects!
- 

#INFOSEC Professionals on Twitter



@LiveOverflow

@yaworsk

@vm00z

@troyhunt

@Hacker0x01

@Hak5

@0xdr3a

@kim_crawley

@SANSPenTest

@TinkerSec

@PaulaCquire

@georgiaweidman

@_bl4de

@PenTestMag

@senorarroz

@maddiestone

@hackingjobs

@Corb3nik

@dreamsindigital

@malwareunicorn

@motherboard

@ctfdio

@girlie_mac

@hacks4pancakes

@greg_IT

@kevinmitnick

@securinti

@fs0c131y

@0xteknogeek

@rootpentesting

@Jhyp3

@ret2got

@jobertabma

@Fox0x01

Show Your Interest

- ★ Read and learn about #infosec history
Reading list <https://chmodx.net/reading-list>
Darknet Diaries podcast: <https://darknetdiaries.com>
- ★ Read popular Cybersecurity blogs & news journals
Motherboard - Hacking https://www.vice.com/en_us/topic/hacking
ThreatPost <https://threatpost.com/>
DarkReading <https://www.darkreading.com/>
The Hacker News <https://thehackernews.com/>
Wired - Cybersecurity <https://www.wired.com/tag/cybersecurity/>
- ★ Creating a blog can be a great way to showcase your developing skills

You don't need to know everything, but showing you are interested in the subject matter is important!



Thank You!

hello@chmodx.net |  chmodx |  chmodx_