



Career in Information Security

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- Chief researcher @ Cyfinoid Research
- 15+ yrs of corporate exposure
- **Speaker / Trainer:** BlackHat, c0c0n, nullcon, RootConf, RuxCon
- **Open Projects:**
 - Code Vigilant
 - Hacking Archives of India,
 - TamerPlatform

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We are talking about your career

- Career choices are hard.
- Think about them but don't fixate too much
- Especially early in career you can switch around easily (2-5yrs)

Ultimately remember

1. its life no one comes out alive
2. Make decisions, if you don't enjoy feel free to move away

Infosec != Hacking

- **Information Security** is a job which deals with providing services to secure enterprises / businesses
- **Hacking** is about exploring the systems and find the unknown

DON'T MIX THE TWO

Title : Hacker's Manifesto

Author : The Mentor

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==Phrack Inc.==
Volume One, Issue 7, Phile 3 of 10
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The following was written shortly after my arrest...

  \\The Conscience of a Hacker\\
  by
  +++The Mentor+++
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Written on January 8, 1986
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  Another one got caught today, it's all over the papers. "Teenager
  Arrested in Computer Crime Scandal", "Hacker Arrested after Bank Tampering"...
  Damn kids. They're all alike.

  But did you, in your three-piece psychology and 1950's technobrain,
  ever take a look behind the eyes of the hacker? Did you ever wonder what
  made him tick, what forces shaped him, what may have molded him?
  I am a hacker, enter my world...
  Mine is a world that begins with school... I'm smarter than most of
  the other kids, this crap they teach us bores me...
  Damn underachiever. They're all alike.

  I'm in junior high or high school. I've listened to teachers explain
  for the fifteenth time how to reduce a fraction. I understand it. "No, Ms.
  Smith, I didn't show my work. I did it in my head..."
  Damn kid. Probably copied it. They're all alike.

  I made a discovery today. I found a computer. Wait a second, this is
  cool. It does what I want it to. If it makes a mistake, it's because I
  screwed it up. Not because it doesn't like me...
  Or feels threatened by me...
  Or thinks I'm a smart ass...
  Or doesn't like teaching and shouldn't be here...
  Damn kid. All he does is play games. They're all alike.

  And then it happened... a door opened to a world... rushing through
  the phone line like heroin through an addict's veins, an electronic pulse is
  sent out, a refuge from the day-to-day incompetencies is sought... a board is
  found.
  "This is it... this is where I belong..."
  I know everyone here... even if I've never met them, never talked to
  them, may never hear from them again... I know you all...
  Damn kid. Tving up the phone line again. They're all alike...
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Information Security

Information Security is a field where we focus on securing the information. The protection could be from malicious attackers or simply unintended tampering/access of data.

In short

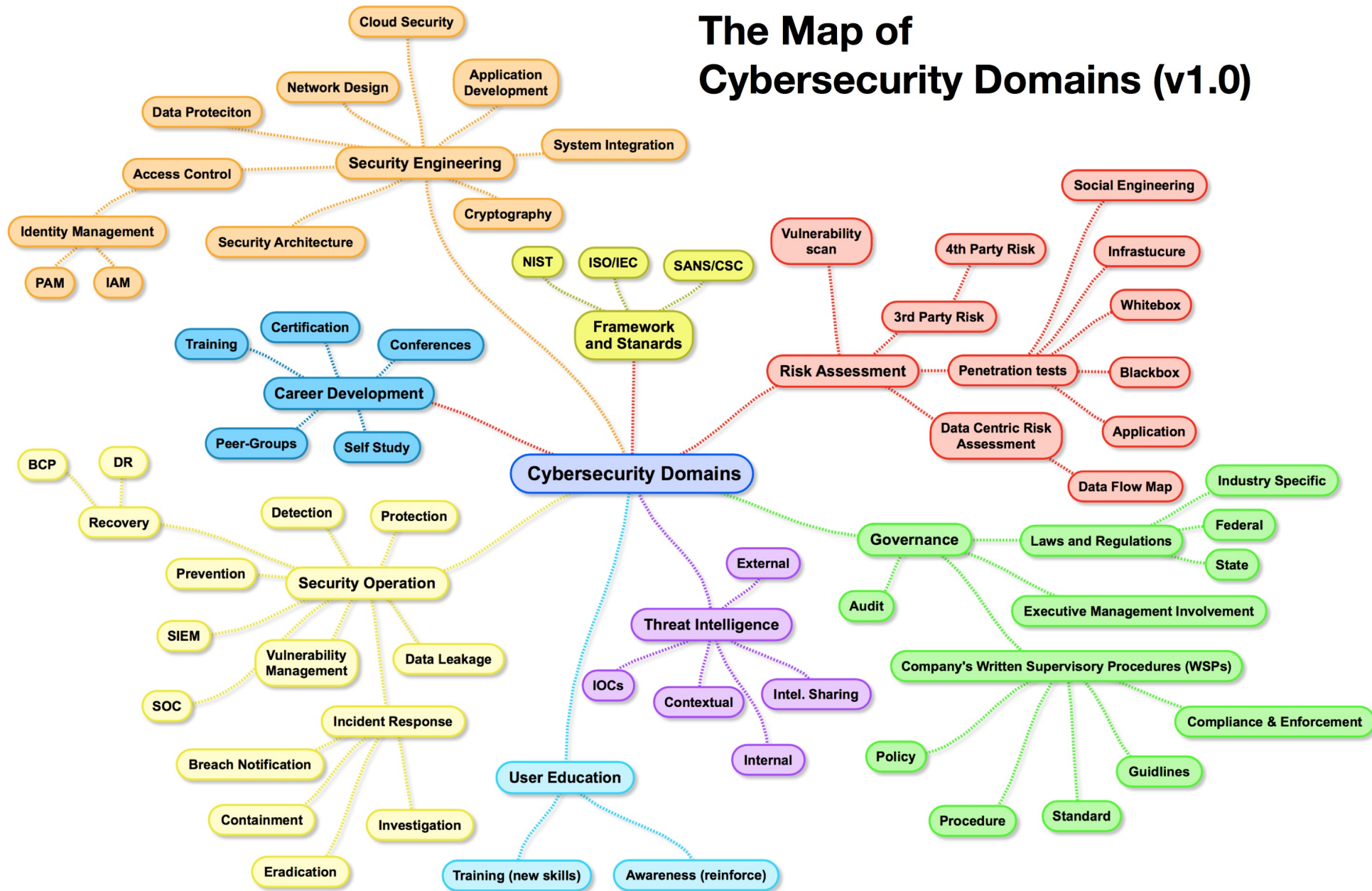
- keep the bad out
- let the trusted in
- give trusted access to
 - what they are authorized to access
 - when they need the access



Domains of Information Security

- Security and Risk Management
- Asset Security
- Security Architecture and Engineering
- Communication and Network Security
- Identity and Access Management (IAM)
- Security Assessment and Testing
- Security Operations
- Software Development Security

The Map of Cybersecurity Domains (v1.0)



Role Types

Offensive

Find flaws and show impact

- Penetration Tester
- Red Teamer
- Exploit Developer
- Malware Analyst
- Vulnerability Assessment Analyst
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Defensive

fix or help in fixing issues

- Secure Developer
- Product Security Engineer
- Blue / Purple Teamer
- Incident Response Team
- Server Administrator
- DevOps / DevSecOps professionals
- Forensic Investigator
- Auditor
- Technical Writer
-

How to Gain Knowledge



Upskill yourself: Refer resources section



Read what others are doing



Follow People who share knowledge



Participate in Communities / Events



Practice

Practice



SETUP OWN LAB
ENVIRONMENT



WRITE WHAT YOU
LEARNED



TALK ABOUT WHAT
YOU LEARNED



PRESENT ABOUT
WHAT YOU LEARNED

Communities / Events in India

Communities

- Null Community @ <https://Null.community>
- OWASP

Conferences (paid)

- C0c0n
- Nullcon

Regional Events (may be paid)

- Bsides
- Defcon groups



Upskilling

- The IT world is moving towards “as a code”
- Programming is a necessary evil (vm macro to ansible to python)
- Earlier you accept it the better it is
- Understand the basics and practice
- Some areas to keep in mind
 - **Automation** : Ansible / Terraform
 - **Programming** : go / rust
 - **Scripting** : python / Bash scripting



Higher Studies v/s Experience

Academia must:

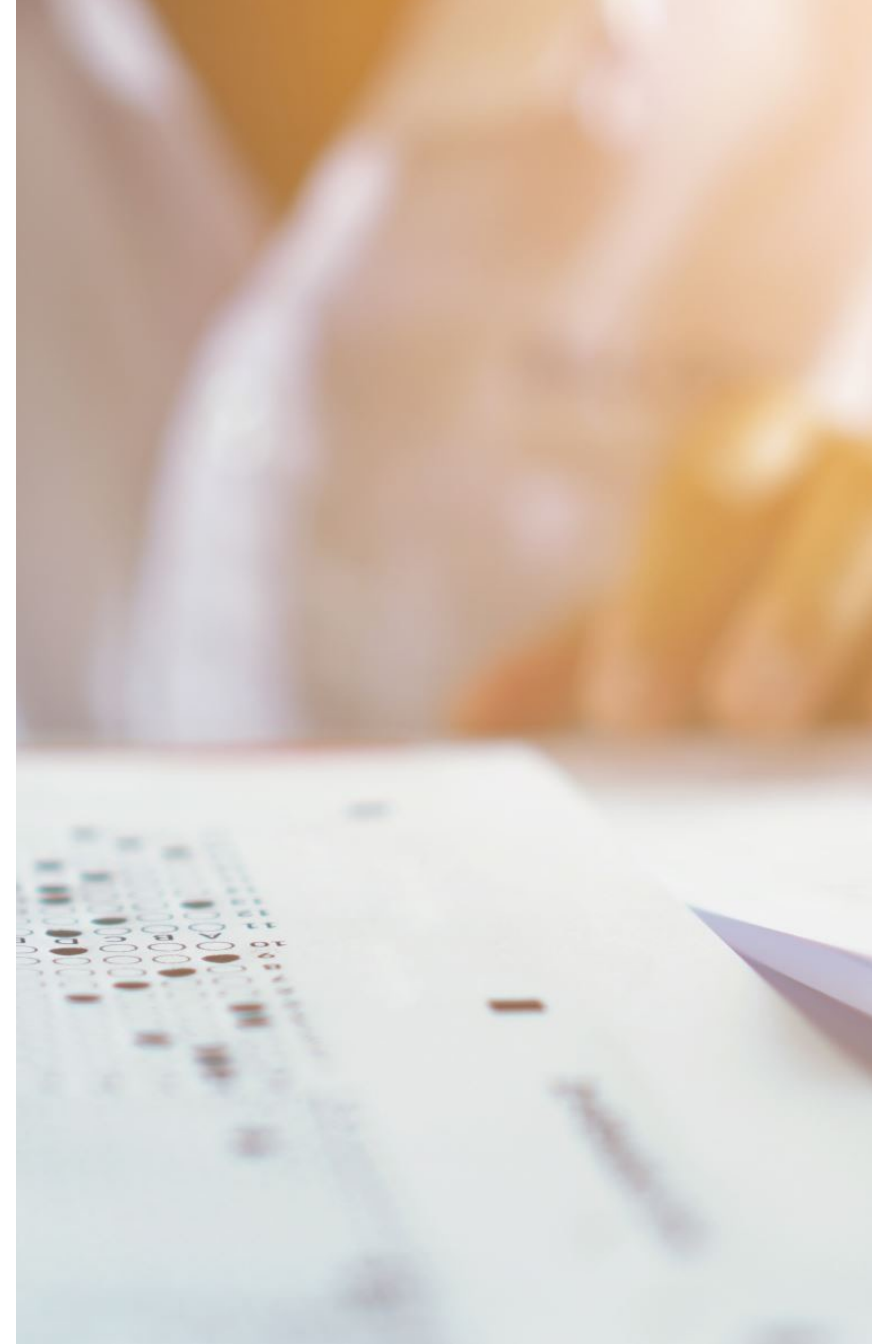
1. Get the basics right for people (Bachelors and master degrees)
2. Think far ahead in future before commercial world (PHd's)

Align your own likings

- **Academia** : If you want to explore future and not worry about implementation of it
- **Commercial world**: If you want to have implementational exposure

Certifications?

- Certification means you were able to solve a specific set of problems at that specific point in time.
- Consider it as a checkbox
- If you give human's challenge; they will find shortest possible way
- Do certification for
 - Clearing HR screening
 - If company sponsors training[+certification] to have accelerated learning





Resume tips (General guidelines)

- Simple words
- Concise
 - (1 page : 0-2yrs, 2 page: 2-10yrs, 3+ only for executives)
 - Reduce past experiences to 1-2 liners
- Talk about your impact not job activities
- Items to keep
 - Items that you want to talk about
 - Items that you show your capabilities in specific field

Interviewer is taking the interview, but your resume drives it.



Resume tips (Personal Preferences)

- Academics matter only till 2-4 yrs experience range
- Hobbies only if you want focus on those
- Things that don't help
 - Club memberships or designations in college
 - Attendance/participation entries (speaker is fine)
 - Photograph or certificate logos
 - Shiny and fancy artwork graphics
 - Your Ikebana prize might be a proud moment, but do you want to talk about it

A top-down view of a desk setup. On the left, a silver laptop is partially visible. Below it is a dark brown leather notebook with a white pen tucked into a pocket. To the right of the notebook are a pair of tortoiseshell glasses. In the top right corner, a white mug is partially visible. The desk surface is a light teal color. A white, torn-edge paper graphic separates the desk image from the text on the right.

Online Presence

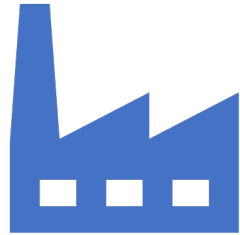
Curate your online presence or
FB/Insta/WA/X/Linkedin do it for you

Associate your identity with your own domain and not
gmail or outlook

At the minimum

- Build your own website
- Host your own blog (write about whatever you learn)
- Host your resume on it

Startup vs Corporate



Startups : PoC Builders for Corporate world

Chaos

Unorganized setup

Fast moving

More power to individuals



Corporate

Processes

Organized

Brand Value

<https://blog.anantshri.info/startups-vs-corporates-unblurring-the-lines-for-job-seekers/>

Remember about Startup's

- Startups are uncertain about future
 - Closure
 - Buy out
 - Acquisition
- They offset the risk by paying huge
- Unless you want to jump around startups don't assume that as your market value. It's the golden handcuffs given to you.

Nothing is good or bad, they are logical choices.

Decide after knowing the differences

Entrepreneur or Job

- Remember being an entrepreneur is
 - 5-10% tech and remaining
 - Finance
 - HR
 - Marketing
 - Sales
 - Customer Interaction
 - (including if required janitor and sweeper)
- If someone is trying to tell you, you don't need to do all of these they are lying.
- even if its not your responsibility you will have to know these areas.

Job or Entrepreneur

- Job gives you a fixed target-based environment (if not then switch)
- Job gives you someone else to blame if things don't work
- Job gives you an assurance of someone else worrying about your paycheck



Finances

- IT Security is one of the highest paying jobs in India
- Don't assume you will keep drawing this high salary
- Prepare a finance plan for yourself
- **Know your expenses**
- Understand what Runway money and Financial Independence means
- Recommended Reads
 - Lets Talk Money : Monika Halan
 - The Psychology of Money : Morgan House

Resources: Practicing the craft

Free + Paid resources in random order

- <https://www.vulnhub.com/>
- <https://pwnedlabs.io/>
- <https://www.hackthebox.com/>
- <https://tryhackme.com/>
- <http://www.hacker.org/>
- <https://sadservers.com/> (defensive)
- <https://summerofcode.withgoogle.com/> (long term paid projects)



Free Resources for everyone

- Github Student Pack

<https://education.github.com/pack>

- 1 Free ebook everyday

<https://www.packtpub.com/free-learning>

- Resources Free for Developers

<https://free-for.dev/>



Credit where credit is due

Following people have provided inputs for the talk

- Dhruv Shah – <https://shahdhruv.info/>
- Dr. Angelina Gokhale - <https://in.linkedin.com/in/angelina-gokhale-9a588214>
- <https://danielmiessler.com/blog/build-successful-infosec-career/>

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