

Meet The **Cybersecurity** Team!

```
lookup.KeyValue  
f.constant(['em  
=tf.constant([G  
.lookup.StaticV  
_buckets=5)
```



Alaa Brahim



Malek Trabelsi



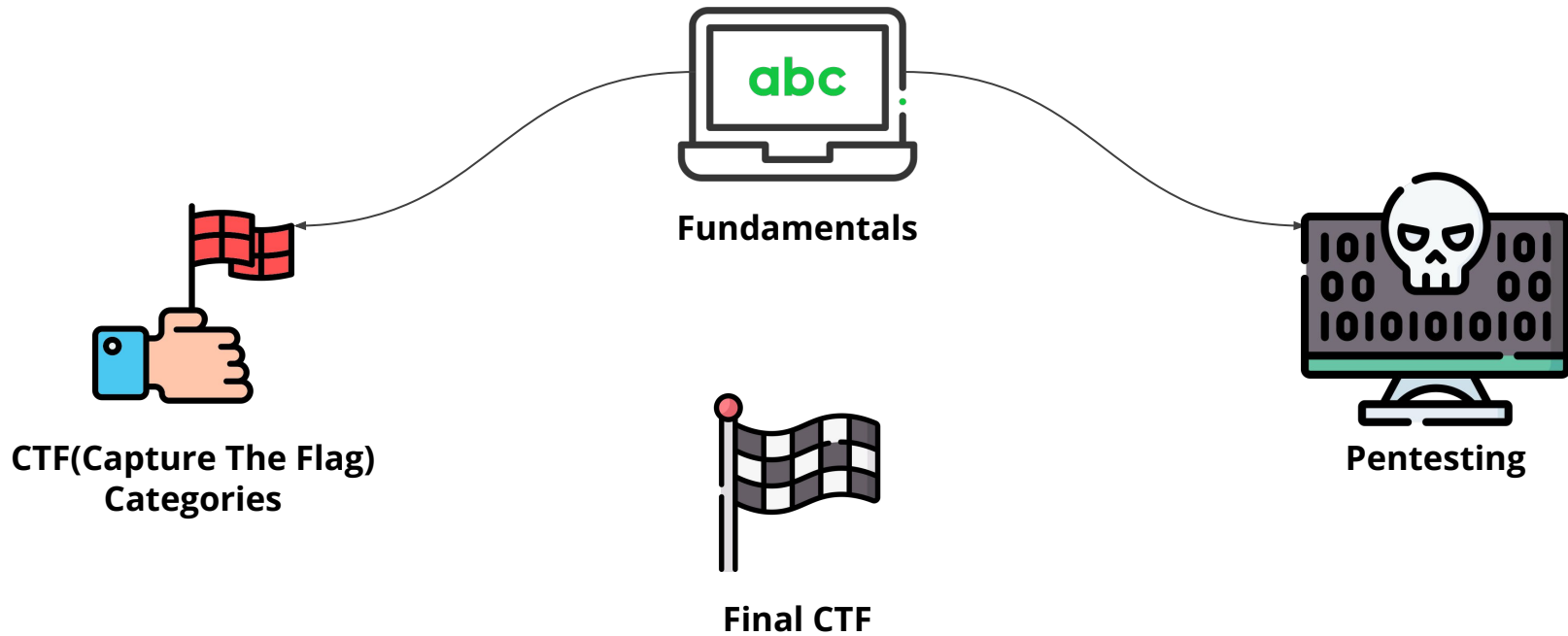
Adem Marzouki



Oussema Hamouda

Take a look at our Plan!

```
lookup.KeyValue  
f.constant(['em  
=tf.constant([G  
lookup.StaticV  
_buckets=5)
```



What is **Cybersecurity**?

```
lookup.KeyValue  
f.constant(['em  
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.lookup.StaticV  
_buckets=5)
```

Cybersecurity is the practice of protecting computer systems, networks, and data from theft, damage, or unauthorized access.

Big Tech Invests Big in Cybersecurity

GAFAM spending on cybersecurity deals and funding per year*



* GAFAM = Google/Alphabet, Amazon, Facebook/Meta, Apple, Microsoft

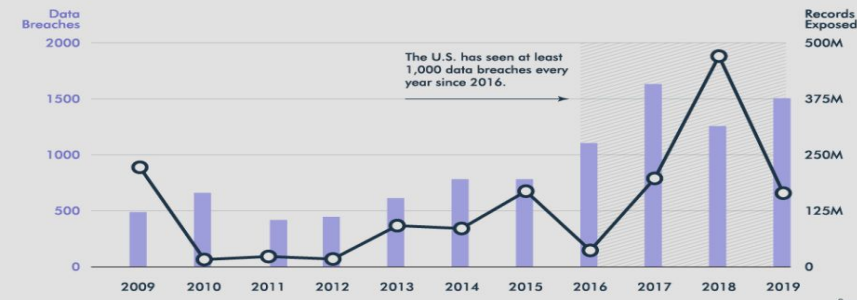
Source: CB Insights



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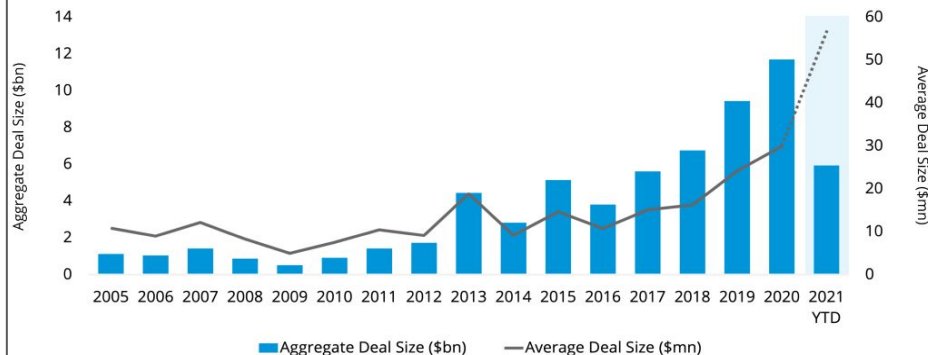
ANNUAL REPORTED

DATA BREACHES IN THE U.S. AND RECORDS EXPOSED



Source: ITC

Fig. 1: US-Focused Venture Capital Deals, 2005 - 2021 YTD



Source: Preqin Pro. Data as of May 2021

Common Cybersecurity Terminology

- **Vulnerabilities**: Weaknesses that can be exploited.
- **Attack**: Unauthorized access or harm to systems.
- **Malware**: Software designed to harm or exploit.
- **Virus**: A type of malware that replicates.
- **Encryption**: Scrambling data in specific ways.
- **Ransomware**: Malware that encrypts data for a ransom.
- **Brute Force Attack**: Repeatedly trying passwords.

White, gray and black hat comparison



WHITE HAT

Considered the good guys because they follow the rules when it comes to hacking into systems without permission and obeying responsible disclosure laws



GRAY HAT

May have good intentions, but might not disclose flaws for immediate fixes

.....

Prioritize their own perception of right versus wrong over what the law might say



BLACK HAT

Considered cybercriminals; they don't lose sleep over whether or not something is illegal or wrong

.....

Exploit security flaws for personal or political gain—or for fun

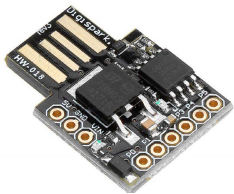


Attack Types

Physical

Involves direct, unauthorized access to a computer system, network, or hardware.

Exp : Break-ins to server rooms



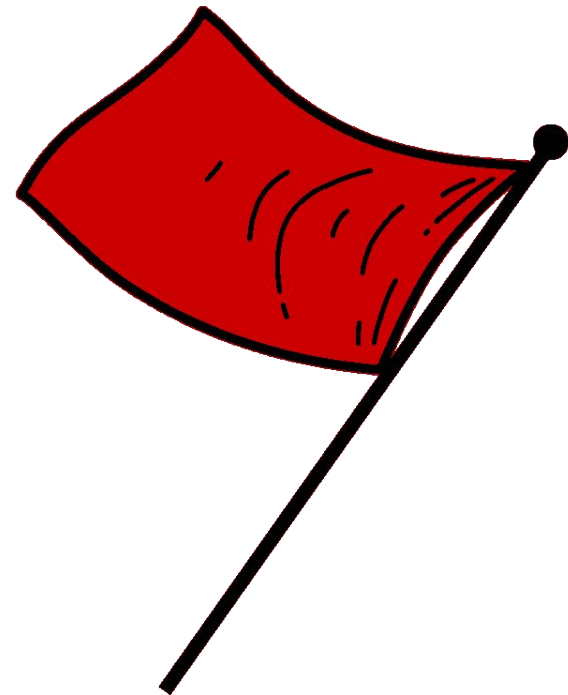
Remote

Occurs when hackers exploit vulnerabilities from a distance, often over the internet.

Exp : Phishing attacks through email or fake websites



Capture The Flag (CTF)



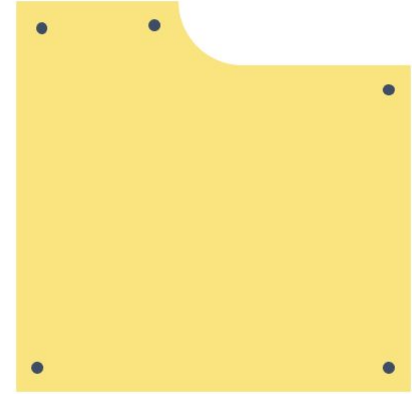
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Cryptography



“When cryptography is outlawed,
bayl bhgynjf jvyv unlr cevinpl.”
—John Perry Barlow

Cryptography is the science of securing information by transforming it into an unreadable format, making it accessible only to those with the right 'key' to decode it.



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Reverse Engineering

Reverse Engineering is the process of dissecting and analyzing software to understand its functionality, structure, and potential vulnerabilities, often without access to the original source code or design.

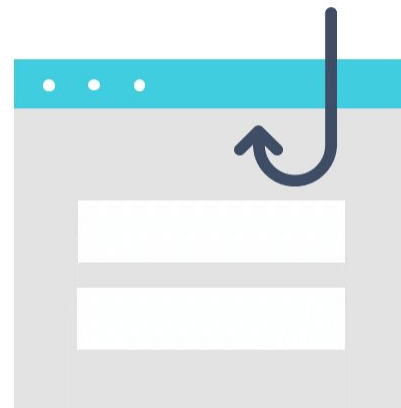

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Web Exploitation

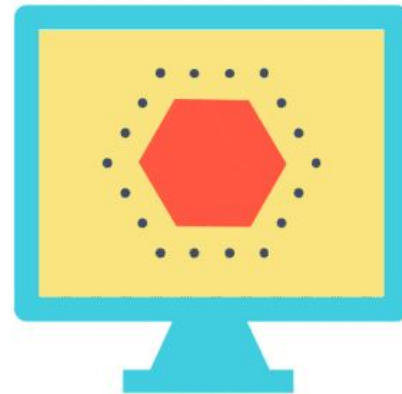


<https://alaabrahim.github.io/gdsc-cyber-intro-web/>

Web Exploitation involves identifying and exploiting vulnerabilities in web applications to gain unauthorized access, manipulate data, or compromise the security of a website.



Open Source Intelligence (OSINT)



First GDSC FST Session
Date?

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Open Source Intelligence (OSINT) is the practice of gathering and analyzing publicly available information from various sources, such as social media, websites, and public records, to uncover insights and potentially identify security risks.

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Steganography

<https://alaabrahim.github.io/gdsc-cyber-intro-web/logo.png>

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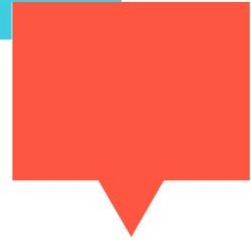
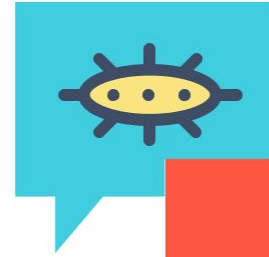
Steganography is the art of hiding secret information within seemingly innocuous files or data, making it challenging to detect, identify and extract concealed content.

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Forensics



<https://alaabrahim.github.io/gdsc-cyber-intro-web/log.txt>

Forensics, in the context of Capture The Flag (CTF), refers to the process of analyzing and recovering information to investigate and solve cybersecurity challenges or incidents.



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Quiz Time !



<https://quizizz.com/join?gc=199168>



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Thank you
Very much!

