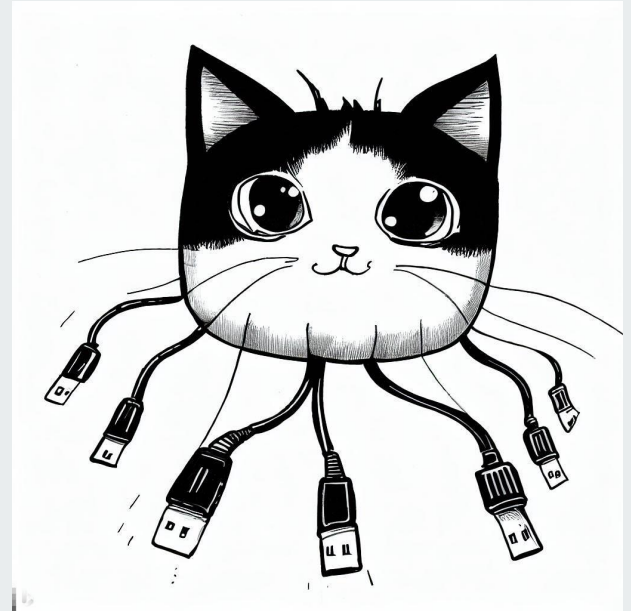


Welcome to Cybercat Hacking Academy!



What will we do here?



- Learn to find anything online
- Learn to hack Wi-Fi
- Learn about Raspberry Pi computers
- Program microcontrollers
- Stay private and secure online
- How to see and access devices online
- Solder and program electronics
- Write code to control electronics
- Make a Wi-Fi connected light box
- Find hidden Wi-Fi devices
- Hack Wi-Fi Devices

Kody Kinzie

I'm Kody!

I work as an ethical hacker (security researcher) and specializes in:

- Open-source intelligence
- Wi-Fi security
- Microcontrollers

I teach cybersecurity to beginners on two popular YouTube channels called *Hak5* and *Null Byte*

I also organize cybersecurity training and outreach events in like this, and present on security topics at hacker conferences.



Areza Bokor

Hi! My name is Areza.

I'm an ethical hacker from Kalispell who enjoys:

- Learning more about how to keep computers secure
- Online privacy
- Open-source software
- Linux
- Python programming



What is hacking?

- Hacking is the process of manipulating computers to do functions that they typically aren't meant to do.
- It involves exploiting, or finding, vulnerabilities that hackers can use to their benefit.





Introductions

Let's introduce ourselves!

- What's your name?
- Have you hacked anything before?
- What do you want to learn here?



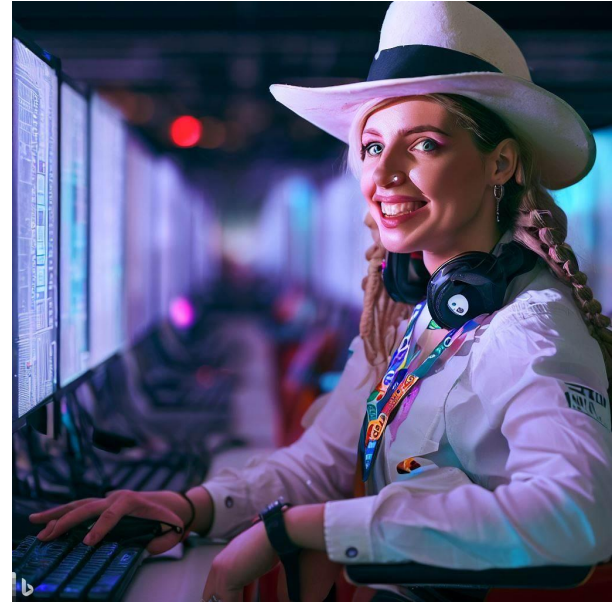
Different Types of Hackers

- Not all hackers are the same
- White hat hackers protect companies
- Black hat hackers hack illegally for profit
- Some hack for political or activists reasons

Threat	Motives
Hackers	Motivated by curiosity and intellectual challenges
Cyber-criminals	Motivated to make quick and easy money through the use of cyber-tactics, primarily on the Internet (e.g., scams through e-mail)
Hacktivists	Motivated by a political agenda; hackers for a cause
Hacking groups	Motivated to gain fame and recognition and to push agendas
Nation-states	Motivated by national security and political/national agendas
Organized crime	Motivated to make money by utilizing technologically gifted individuals
Techno-criminals	Motivated to make money through the use of technology; think of them as technologically enabled con men (e.g., credit card skimmers)

White Hat Hackers

- Cybersecurity professional hired to protect a business.
- Help by identifying vulnerabilities and improving defenses.
- Roleplay as hackers to test security using the same methods as black hats



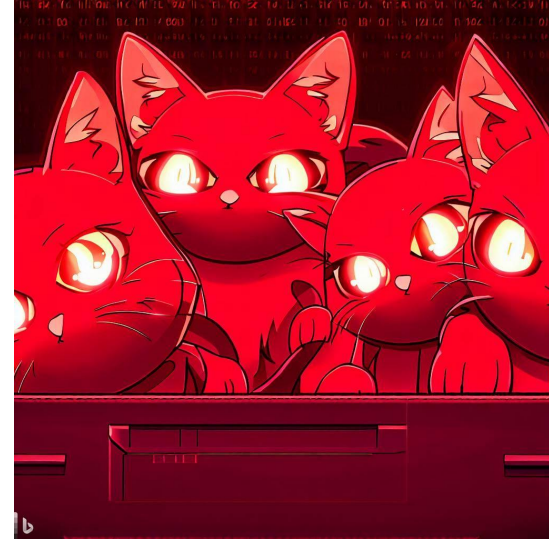
Black Hat Hackers

- Hackers who illegally exploit computers for personal motives
- Exploit vulnerabilities in computer systems to commit crimes.
 - Ransomware - encrypting files
 - Stealing credit card numbers
 - Selling personal data to scammers
 - Stealing TikTok accounts



Red Team

- A red team is a group of ethical hackers who simulate real-world attacks on systems to assess their security.
- The red team's objective is to find and report problems before a blackhat hacker does



Blue Team

- Cybersecurity professionals who protect systems from attacks.
- Monitor, analyze, and respond to security incidents and threats.
- Prevent digital break-ins by planning defenses and plugging holes



Is hacking legal?

- Yes -
ONLY IF it is done with explicit permission from the owner of the system.
- Allowed for ethical hackers conducting vulnerability assessments and penetration testing.
- *Many* companies offer rewards (bug bounties) for hackers who report security bugs in their systems, encouraging legal hacking.



When Is Hacking Illegal?

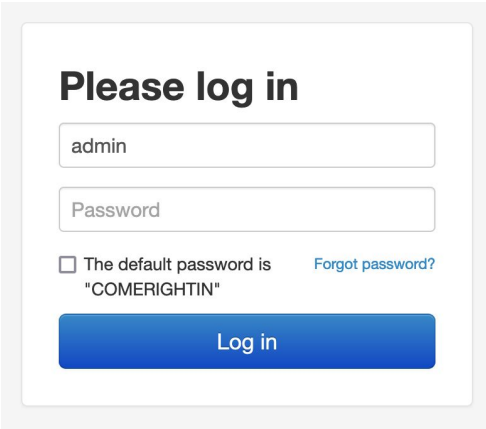
- Accessing a computer system without permission from the owner or administrator.
- Hacking with the intent to cause harm, steal data, disrupt systems, or commit fraud
- Even logging in to a password-protected system without permission is a crime
- you can look but not touch.





Example: Is this legal?

Scenario: You find a login page that has the default login and password exposed in plain text. If you log in, is it illegal?



Please log in

admin

Password

☐ The default password is "COMERIGHTIN" [Forgot password?](#)

Log in

Yes- Accessing any computer system that requires a password without the permission of the owner of the system is illegal

No- If the login and password are exposed, it's fine to log in as long as you don't modify any system settings



What is legal to hack?

- Your Raspberry Pi
- Your own router
- Computer, phone, or any other devices you own
- Any system you have permission to hack
- Websites like tryhackme.com



Hacking laws: Computer Fraud and Abuse Act

- Federal law that addresses unauthorized access to computers and networks.
- Makes it illegal to access a protected computer system without authorization, and with the intent to obtain information or commit fraud.
- Also makes activities such as damaging, altering, or destroying computer data or systems without permission illegal.
- Applies to individuals and organizations.



Hacking laws: Denial of Service

- Breaking a service, jamming a network, or preventing someone from using a device is also considered a crime
- It is not legal to block a data connection, or disable a system that isn't yours
- This includes sending too many messages, causing a computer to crash, or using a jamming device

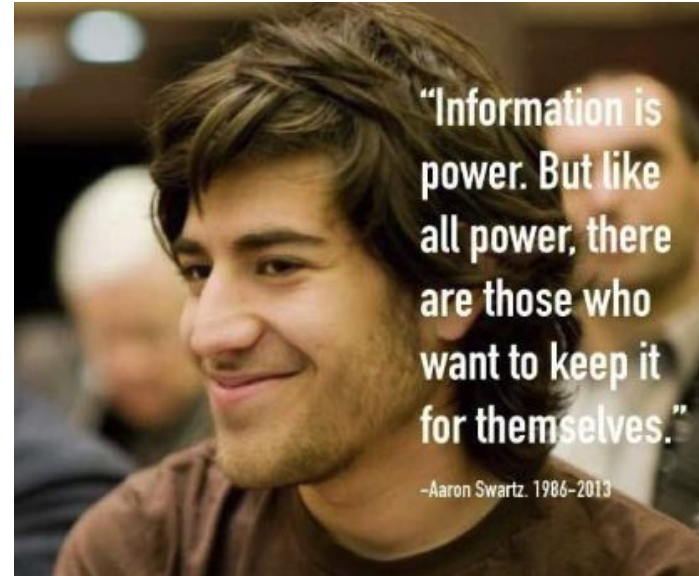
Aaron Swartz: The Early Story

- Child Prodigy: Aaron was a coding whiz from childhood, showing brilliance early on.
- Co-founder of Reddit: In his late teens, he co-founded the popular website, Reddit.
- Fighting for Information Freedom: A strong advocate for open access, Aaron co-authored the "RSS" at just 14 years old.
- Social Activist: He used his tech skills for social causes, showing we can use our talents to make a difference.



The Dangers of Unauthorized Computer Access: The Story of Aaron Swartz

- Aaron Swartz accessed MIT's network without permission to download and share academic articles.
- Even if the intent is good, unauthorized access is illegal
- Aaron was charged with several felonies. The risk of severe punishment is real when you break computer security laws.
- Personal Impact: The intense legal battle affected Swartz's mental health, as he faced many years in prison
- Consequences are Permanent: Sadly, Swartz's story ended tragically when he took his own life. It's a strong reminder that the consequences of such actions can be long-lasting and irreversible.





What kind of jobs do hackers have?

- **Cybersecurity Analyst**
 - Identifies and protects against digital threats by analyzing systems and networks for vulnerabilities.
- **Security Consultant**
 - Provides advice to organizations on enhancing overall security and creating incident response plans.
- **Malware Analyst**
 - Studies and investigates malicious software to understand its behavior and develop ways to detect and stop it.



Other Kinds Of Jobs

- Cybersecurity Education
 - My job! Make videos and pictures about cybersecurity
- Red Teaming
 - Attacks organizations using the techniques of a real hacker to help businesses protect themselves
- CISO
 - Chief Information Security Officer is the top cybersecurity officer at any organization, makes all major decisions



Other Kinds Of Jobs

- Electrical Engineering & Prototyping
 - Hacks together new devices from electrical components and programs them into new products
- Investigator
 - Police or reporters who investigate crimes and events



What are bug bounties?

- Reward programs offered by companies to encourage individuals to find and report security vulnerabilities in their systems.
- Bug bounty hunters search for and identify security flaws or bugs in systems.
- When they find a vulnerability, bug bounty hunters responsibly disclose the details to the company, who then rewards them (usually) with money.

What skills do hackers need to get started?

- Networking/IT
- Computer Science
- Electrical Engineering
- Problem solving
- Online research
- Thinking outside of the box



What did we learn today?

What is hacking?

Different Types of Hackers

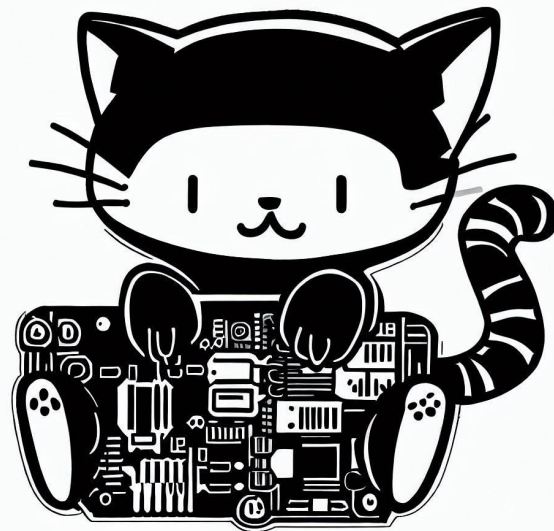
White/Black Hat Hackers

Red/Blue Team

Hacking Legality

The Story of Aaron Swartz

Hacking Jobs



Final Tests:

Now that you've learned about ethical hacking, can you tell which of these actions, and which of these are not?

Remember, the rule of thumb is you can look, but not touch!

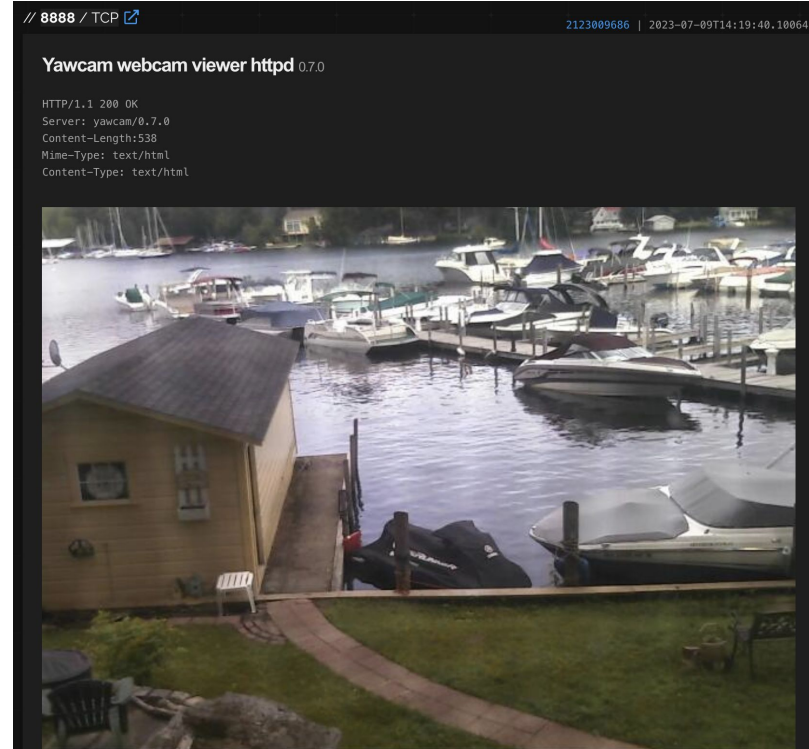


Test #1

A hacker scans the internet using Shodan, a search engine for anything connected online.

The hacker finds a webcam which does not require a login to view.

Can the hacker view a webcam they find online without breaking any laws, even without permission?



Test #2

A hacker guesses that the login for their school's grading system is "password123" and logs in as a teacher.

The hacker doesn't change anything, and logs out after confirming they guessed the right password

Reset PIN / Password

Reset :

☐ PIN ☒ Password

Patient/Employee :

☐ Patient ☒ Employee

Patient ID/Employee UserName:

Kathleen Howe, MD

Reset

Password has been reset to 'password123'

Test #3

A hacker finds a way to automate entries into a contest, and submits many votes all at the same time.

They cause so many votes to be submitted that the server freezes, preventing some people from voting.

World's Cutest Rescue Dog Contest

The 2023 PEOPLE's World's Cutest Rescue Dog Contest Presented by the PEDIGREE® brand wants to meet the canine that changed your life

By **Staff Author** |

Updated on June 23, 2023 08:46AM EDT



CONTEST DETAILS

ENTER NOW

RULES

Submit Your Entry
June 23-Aug 4

Judging
Aug 7- Aug 24

Voting
Aug 25- Sept 22

Winner Announced
Oct 20

ENTER THE CONTEST

Enter your email address to submit your nominee and stay up-to-date on the latest celebrity news, human interest stories, and more.

Your Name

First

Last

Your Email

Email Address

Now you know!

Congratulations! You now know how to legally and ethically hack computers!

What are some of your thoughts on what we just went over?

Have you seen anybody hack before?

