



# Ethical Hacking

Luke Tangen: CS 3111: Computer Ethics



# What is Hacking?

- “The gaining of unauthorized access to data in a system or computer”
- “An expert at programming and solving problems with a computer”
- Often believed hacking only affects major businesses
- Who are the hackers?

# Hacking statistics

- There is a hack attack every 39 seconds.
- Russian hackers are the fastest.
- There are 300,000 new malware is created every day.
- Multi-factor authentication and encryption are the biggest hacker obstacles.
- The cybersecurity budget in the U.S is \$14.98 billion
  - U.S national debt, April 2020: 23,702,260,238,910
  - Cybercrime is more profitable than global illegal drug trade

# DEFCON

- Originated in 1992
- Located in Las Vegas
- Who attends? Why?



# Ethical Hacking

- Definition of a ethical hacker, “A person who hacks into a computer network in order to test or evaluate its security, rather than with malicious or criminal intent.”
- Also known as White Hat Hackers
- Companies will hire talented ethical hackers to find any vulnerabilities or flaws in their code.
  - Certified Ethical Hacker
    - Exploits bad code that is written

# Positive Impacts

- Safer Internet
- Think like the hackers
- Inform and improve
- Potentially stop attacks



# Hire the hackers!

- Ted Talk presented by Misha Glenny
- Prisons or Jobs?



# Max Vision

- Extremely intelligent hacker
- As a volunteer for the FBI, he saw a flaw in the code for nuclear weapons and fixed it
- After convicted, many say he turned to the “dark side”
- Now serving 13 years in Federal prison



Santa Clara County Sheriff

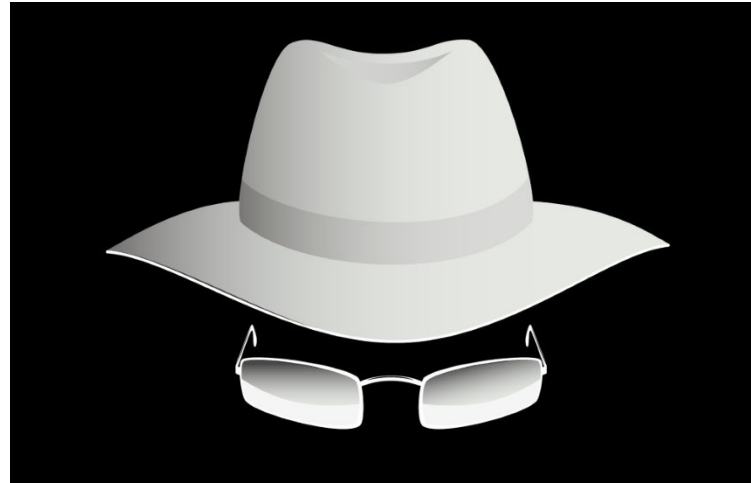
# Hackers: The Internet's Immune System

- TED talk presented by Karen Elazari
- Sometimes the only way to fix something is to prove that it's broken
- What could they do? What do they do?
- Just want the attention on issues they support



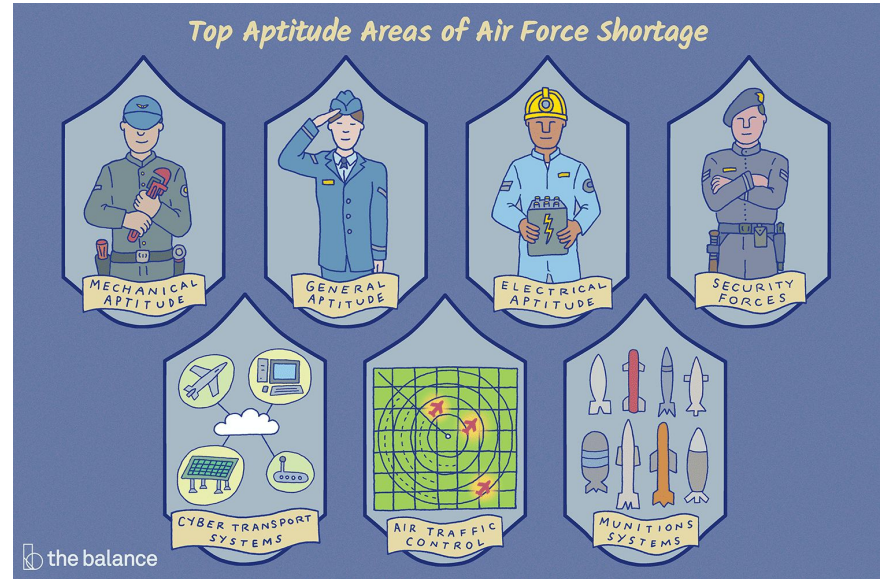
# Careers and Jobs

- Most Ethical Hackers are hired by computer security agencies
  - DXC technologies
- Many White Hat Hackers now hold high paying jobs for corporations or governments
- One of the fastest growing careers



# Continued

- Air-force is a current example
- 75 million dollar contract with Dark Wolf
- “For the past three years now we have really been embracing the hacker community”
- Penetration test have been used before
  - Hopefully to prevent a full-on assault





MindMajix

# Reasons To Learn Ethical Hacking

Scope for Career

Worth Investing

Salary Trends

Google Trends

Build Awareness

Become  
a Certified Expert

Online Presence

Knowledge  
The Power

The System  
Security

Good Pay

Hidden Technique

Explore

# Negative Impacts

- All computer professionals are hackers at heart
- Roger Grimes was a white hat hacker for 3 decades
- He admits he “needs to scratch an itch”
- Disney channel and the set-top cable box

For the companies being hacked as their

- Site may be down for extended lengths of time
  - May lose followers and supporters that fear using a website because of a hack



# Ethics

Kantianism:

First Formulation - Is it ethical for every person to try and get into any website?

Second Formulation - Are you fixing code for monetary gain or for the greater good?

Virtue Ethics: Intent almost always starts justified

# Questions