Welcome to Cybersecurity and Ethical hacking

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Motivation

Be the Digital Guardian of the Future

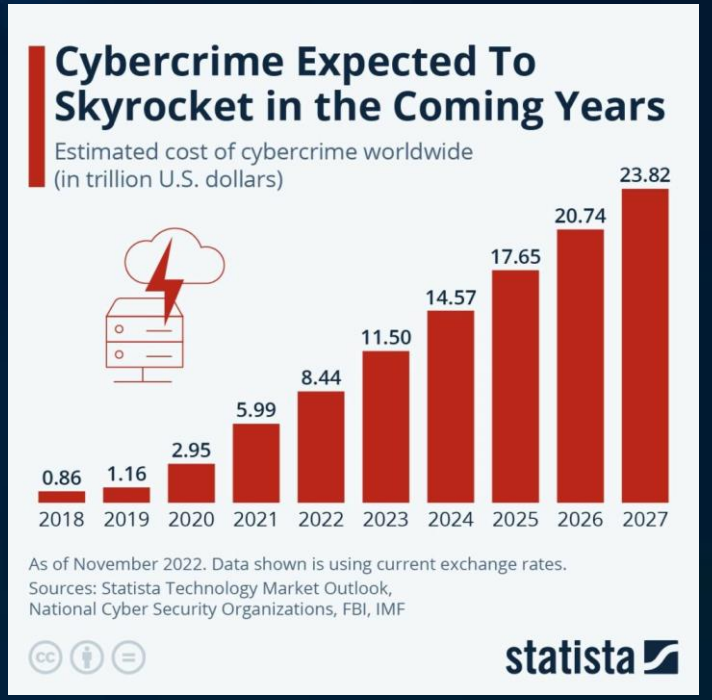
- **In a world where data is more valuable than gold, ethical hackers are the protectors of truth.**
- Every day, businesses, governments, and individuals are **under attack** .
- By learning ethical hacking, you gain the skills to defend, investigate, and **prevent these cyber threats** .
- You don't just become a coder—you become a **cyber warrior.**

High Demand, High Impact Career

- **Cybersecurity jobs are among the fastest-growing and highest-paying in tech..**
- Global shortage of millions of cybersecurity experts means **endless opportunities** .
- Ethical hacking offers roles like: **Penetration Tester**, **Security Analyst**, Red Teamer, and Forensic Investigator .
- You get paid to think like a hacker — but **to protect**, **not harm**.

Estimated Lost of Cybercrime

- The cost of cybercrime has seen **exponential growth** over the past decade:
- **2018:** Estimated global cost was **$0.86 trillion.**
- **2020:** The cost rose to **$2.95** trillion.
- **2022:** Cybercrime cost reached **$8.44** trillion.
- **2024:** Estimated to hit **$14.57 trillion.**
- **2027** (Projected): The global cost is expected to skyrocket to **$23.82** trillion.



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Global Cybersecurity Job Demand

- The demand for cybersecurity professionals has seen **exponential growth** over the past two decades:
- **2000:** Approximately **100,000** unfilled cybersecurity positions worldwide.
- **2013:** The number grew to **1 million** unfilled positions.
- **2021:** Unfilled positions reached **3.5 million** globally.
- **2025** (Projected): The gap is expected to widen further, with estimates suggesting over **4 million** unfilled positions.

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Jump Over The Topics

Let’s Get Started

What is Cybersecurity?

Cybersecurity is the practice of protecting systems, networks, applications, and data from digital attacks.

These attacks are typically aimed at accessing, changing, or destroying sensitive information, extorting money, or interrupting normal business operations.

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Core areas of cybersecurity

Network security
Protects computer networks from intrusions, misuse, or unauthorized access.

Application security
Secures software applications by fixing vulnerabilities in code and configurations.

Information security
Safeguards data integrity, confidentiality, and availability across all systems.

Endpoint Security
Secures individual devices like laptops, phones, and desktops from threats.

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What is Ethical Hacking?

- Ethical hacking refers to legally breaking into computers and devices to test an organization's defenses.
- The goal is to identify vulnerabilities in systems before malicious hackers can exploit them.
- Ethical hackers are also called “white-hat hackers.”

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Purpose of Ethical Hacking

- Identify and patch vulnerabilities
- Test incident response and detection
- Strengthen system defenses
- Prevent data breaches

Cybersecurity VS Ethical Hacking

Aspect	Cyber Security	Ethical Hacking
Definition	Protecting systems and data from cyber threats	Finding vulnerabilities to prevent exploitation
Primary Goal	Defense and prevention	Identifying weaknesses
Approach	Holistic, covering all aspects of security	Offensive, focused on simulating attacks
Skillset	Broad, including firewalls, encryption, and risk management	Specialized in penetration testing and vulnerability analysis
Tools	Firewalls, encryption tools, and security protocols	Penetration testing tools like Metasploit
Role in Organization	Ensure overall security and compliance	Test systems and recommend improvements
Focus Area	Long-term protection and security management	Short-term testing and vulnerability detection

Types of Hackers

Black Hat

Malicious hackers who exploit vulnerabilities for personal or financial gain.

White Hat

Ethical hackers who work with permission to improve security.

Gray Hat

Hackers who may break into systems without permission but don’t have bad intentions.

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Legal Implications in Bangladesh

Digital Security Act 2018 (DSA)

Any unauthorized access to computer systems, networks, or databases is punishable.

Penalties: Up to 14 years of imprisonment and/or fines.

ICT Act 2006.

It supports legal actions for hacking-related offenses.

Cybersecurity Career Paths

- **Penetration Tester**
- **SOC Analyst** (Security Operations Center)
- **Security Analyst**
- **Malware Analyst**
- **Incident Responder**
- **Forensics Expert**

Answer These Questions

Which one is Defensive?

1.Ethical Hacking
2.Cybersecurity

There are _____ type of Hacker in this field.

What is the Full form or “SOC”?

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The End

Thank You

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