INFOSECTRAIN
Educate. Excel. Empower.

AI Powered Course

Cyber Defenders 101

Free AI Cybersecurity Fundamentals Fast-Track Online Training

www.infosectrain.com

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What?

A campaign to endorse and expand cybersecurity skills through complementary training

Why?

The need to address a worldwide Cybersecurity skills gap of **3.4 Million Professionals**

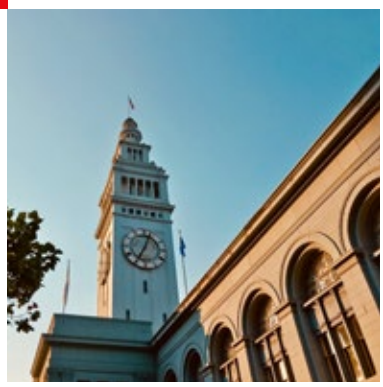
Our Mission

Training **1 Million** Professionals in Cybersecurity Skills by **2027**

Who Can Benefit?

Freshers exploring cybersecurity as a career

Instructors looking to enhance their knowledge and add value



Institutions aiming to train students or hire a cybersecurity educator

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Course Highlights

Upskill for FREE

At InfosecTrain, we are committed to making the internet a safer place for all. That's why we're thrilled to introduce our groundbreaking FREE training initiative with a bold mission.

Expert Guidance

Industry experts not only train you on the essentials of cybersecurity but also give career guidance and provide valuable insights into the job opportunities in this field.

Train the Trainer

By training educators, we create a ripple effect that ensures students across the educational spectrum receive essential cybersecurity knowledge.

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Course Description

In an era when cyber threats are advancing rapidly, the need for skilled cybersecurity experts is at its peak. A study by the Center for Strategic and International Studies highlights an 82% gap in the cybersecurity workforce, emphasizing a critical talent shortage. To address this, InfosecTrain offers a free cybersecurity training course to bridge the global skills gap of 3.4 million professionals. The program provides comprehensive training in fundamentals, ethical hacking, network and web security, enabling personal and professional growth at no cost.

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Course Content

Module 1

Cybersecurity Foundations

1.1 What is Information Security?

- Data vs Information vs Security
- Why cybersecurity matters today
- Real-world breach examples (non-technical explanation)

1.2 Information Security vs Cybersecurity

- Scope differences
- Where both overlap in modern systems

1.3 Security Controls

- Administrative
- Technical
- Physical
- Preventive, Detective, Corrective, Deterrent

1.4 CIA Triad

- Confidentiality, Integrity, Availability
- Importance of CIA Triad

1.5 Modern Security Models

- Basics of **Zero Trust**
- Defense-in-depth

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Module 2

Network Security Essentials

2.1 Understanding Network Security

- Attack surface (ports, services, protocols)
- Common network attacks: scanning, sniffing, spoofing

2.2 IDS, IPS, Firewalls & Honeypots

- How IDS detects
- How IPS prevents
- Firewall filtering basics
- Honeypot and deception

2.3 Vulnerability Assessment

- Vulnerability vs threat vs exploit
- Types of scanning (port, service, OS detection)

2.4 Practical Topics

- Nmap scanning

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Module 3

Modern Threat Landscape

3.1 Types of Cyber Threats

- Malware (basic types)
- Ransomware
- Phishing & Social Engineering
- Insider threats

3.2 Basic Defense Strategies

- Email hygiene
- Secure browsing
- Using MFA
- Patch updates

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Module 4

Web Application Security

4.1 HTTP/HTTPS Basics

- Request, response, cookies, sessions

4.2 Web Application Architecture

- Client Server Database
- Where vulnerabilities appear

4.3 Common Web Attacks

- Injection (SQLi, command injection)
- Authentication issues
- Broken access control
- Cross-site scripting basics

4.4 Practical Topic

- Exploiting basic web vulnerabilities

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Module 5

Mobile Security

5.1 Mobile Platform Basics

- Android vs iOS structure
- App permissions

5.2 Key Mobile Threats

- Rogue apps
- Insecure storage
- Weak authentication

5.3 Rooting, Jailbreaking, Bricking

- Why attackers do it
- Security risks

5.5 Practical Topic

- Simple Android exploitation demo

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Module 6

Cloud Security Essentials

6.1 Introduction to Cloud Computing

- Key characteristics (on-demand, elasticity, shared responsibility)
- Why organizations move to cloud

6.2 Cloud Service Models

- IaaS
- PaaS
- SaaS

6.3 Deployment Models

- Public
- Private
- Hybrid
- Multi-cloud

6.4 Threats to Cloud Environments

- Misconfigurations
- Weak IAM
- Data exposure

6.5 Cloud Security Best Practices

- Encryption
- Logging/monitoring
- Network segmentation

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Module 7

AI & Cybersecurity Fundamentals

7.1 Why AI Matters in Cybersecurity Today

- Understanding AI
- Automation of attacks
- Use of AI for defense

7.2 AI Basic Concepts

- Machine learning vs deep learning
- Data → Model → Prediction flow

7.3 AI in Cyber Defense

- AI for log analysis
- AI for phishing detection
- AI for malware classification

7.4 Risks of AI in Security

- Deepfakes
- AI-driven phishing

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Module 8

Data Security, Risk & Compliance

8.1 Importance of Data Security

- Why organisations classify data
- Breach impact

8.2 Data Classification

- Public, internal, confidential, restricted

8.3 Data Backup & Recovery

- Backup types
- RPO & RTO simplified

8.4 Introduction to Risk Management

- Risk = threat × vulnerability × impact
- Risk analysis basics
- Treatment strategies

8.5 Compliance & Ethics

- Basics of GDPR, HIPAA, PCI-DSS, ISO 27001
- Cyber ethics and responsible behaviour

End-of-Course Wrap-Up

- Recap of defenses
- Where to go next

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