

OPPORTUNITIES IN DIGITAL WORLD – CYBERSECURITY



What is Cybersecurity?

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

These cyberattacks are usually aimed at

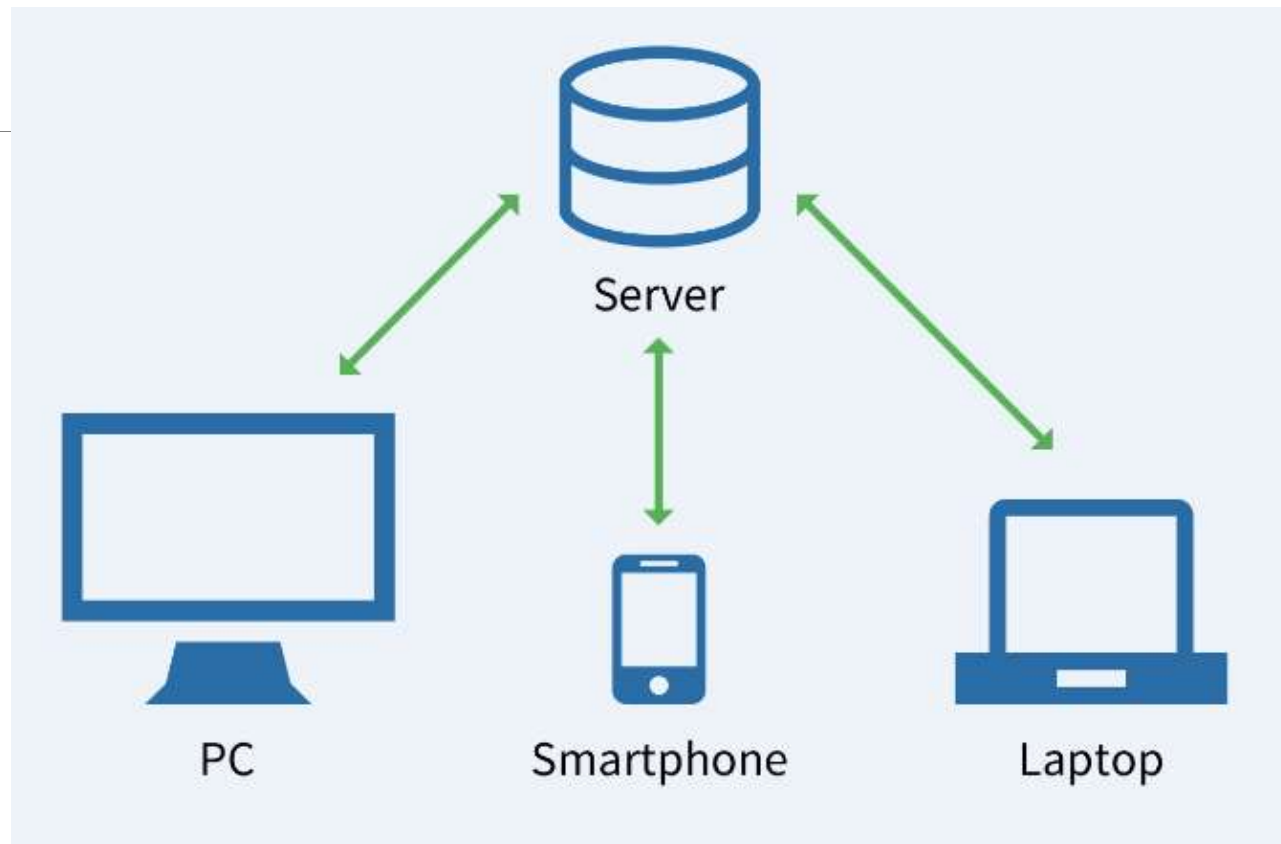
- ❖ accessing, changing, or destroying sensitive information;
- ❖ extorting money from users; or
- ❖ interrupting normal business processes.

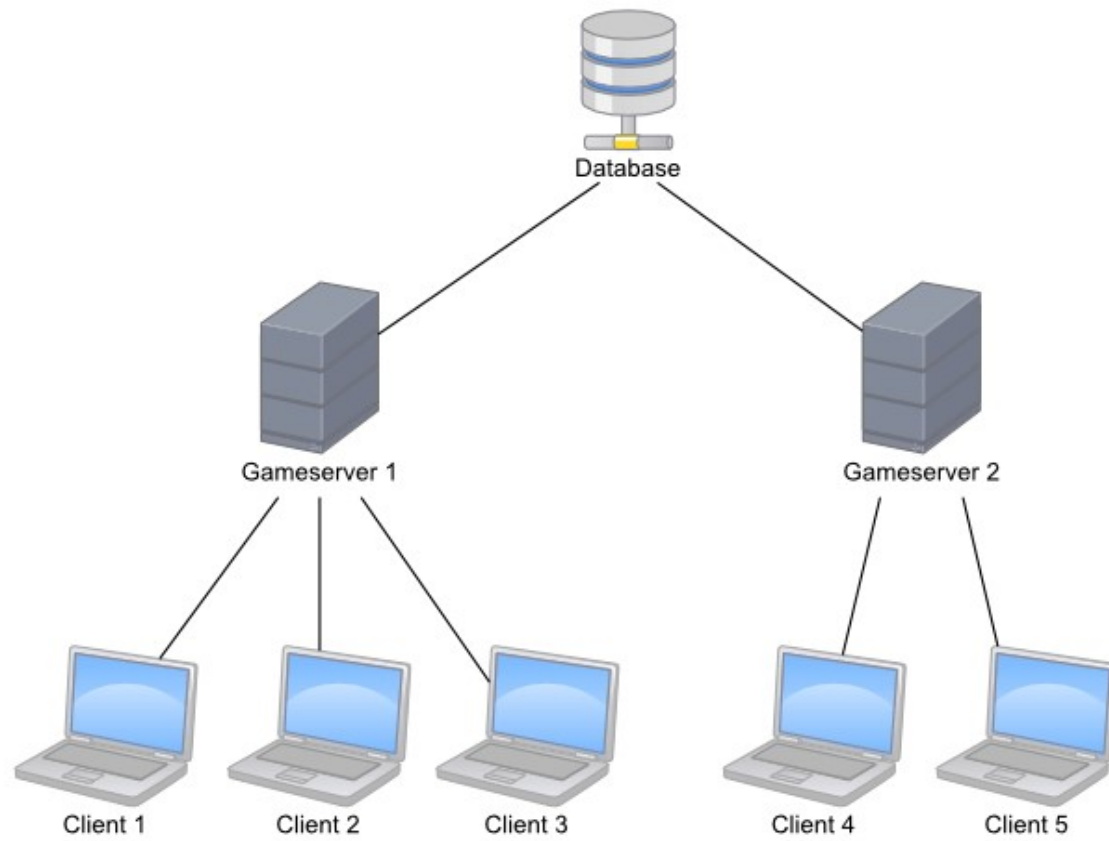
Implementing effective cybersecurity measures is particularly challenging today because there are more devices than people, and attackers are becoming more innovative.

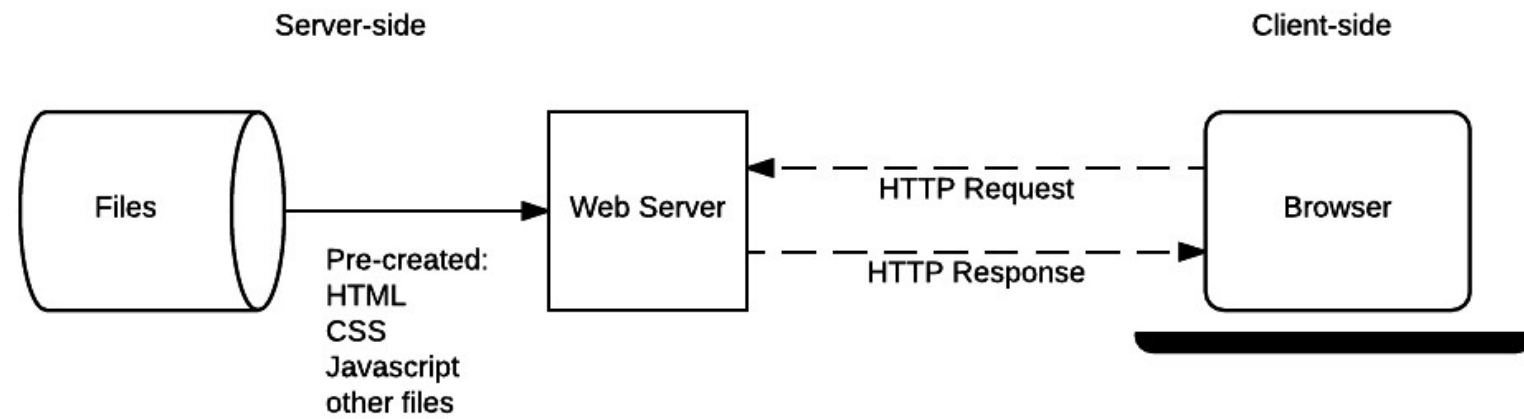


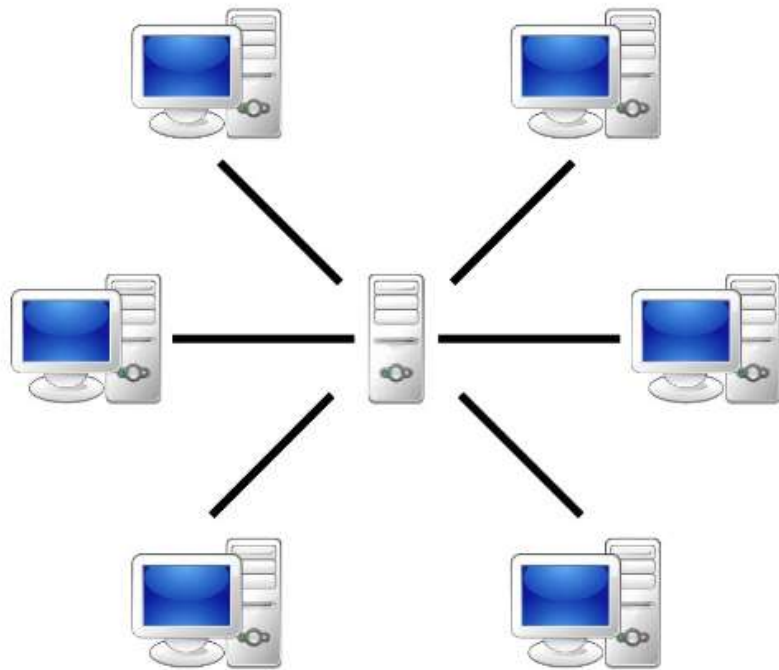
Asset : Data / Information

- Computer [Client / Server]
- Mobile Phones
- Network
- Applications (Software)
- Hardware
- Technology

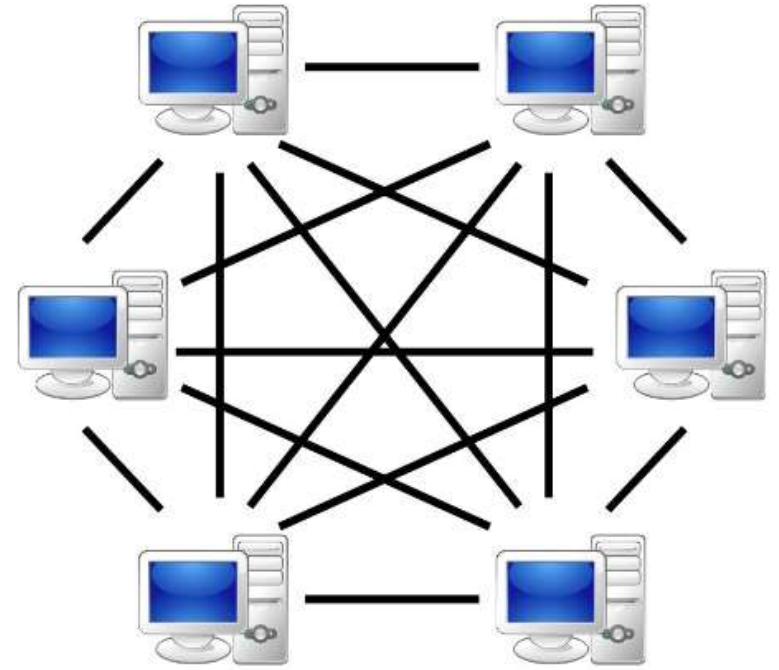









Server-based



P2P-network

Technology

- Machine Learning / Deep Learning / Artificial Intelligence
 - Data Analytics
 - Cloud Computing
 - Edge Computing
 - Internet of Things
 - Cyber Physical Systems
 - Augmented Reality / Virtual Reality
 - Web Technology / Applications
 - Mobile Technology / Applications
 - and many more....
- 
- A solid blue horizontal bar spanning the width of the slide, located at the bottom.

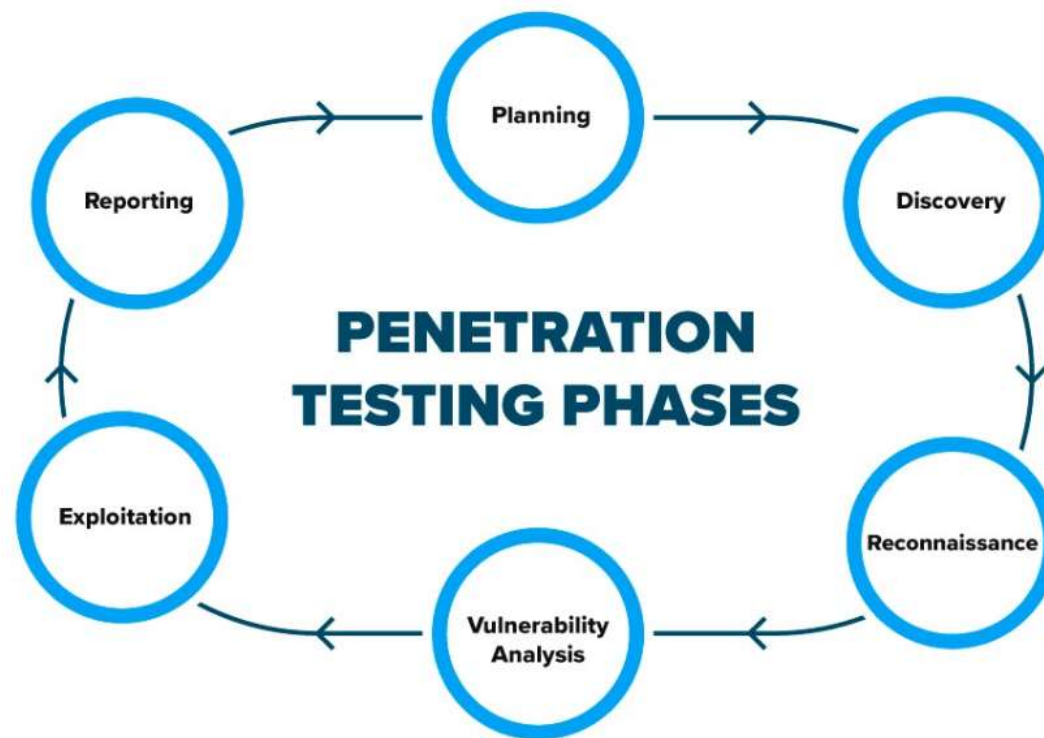
Sub-domains of Cybersecurity

- Ethical Hacking
- Penetration Testing
- Cyberforensics
- Security Solutions
- Blockchain Technology

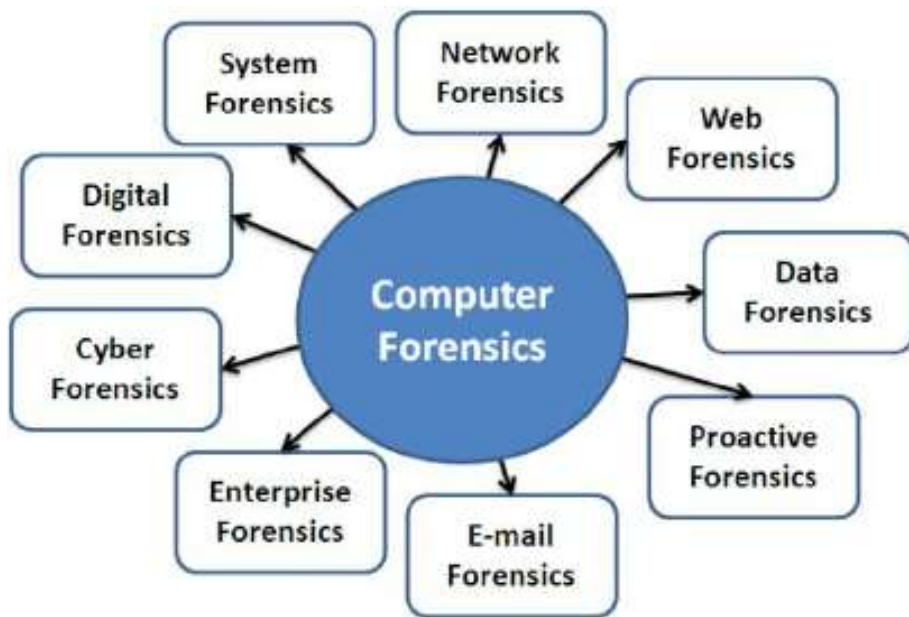
Ethical Hacking



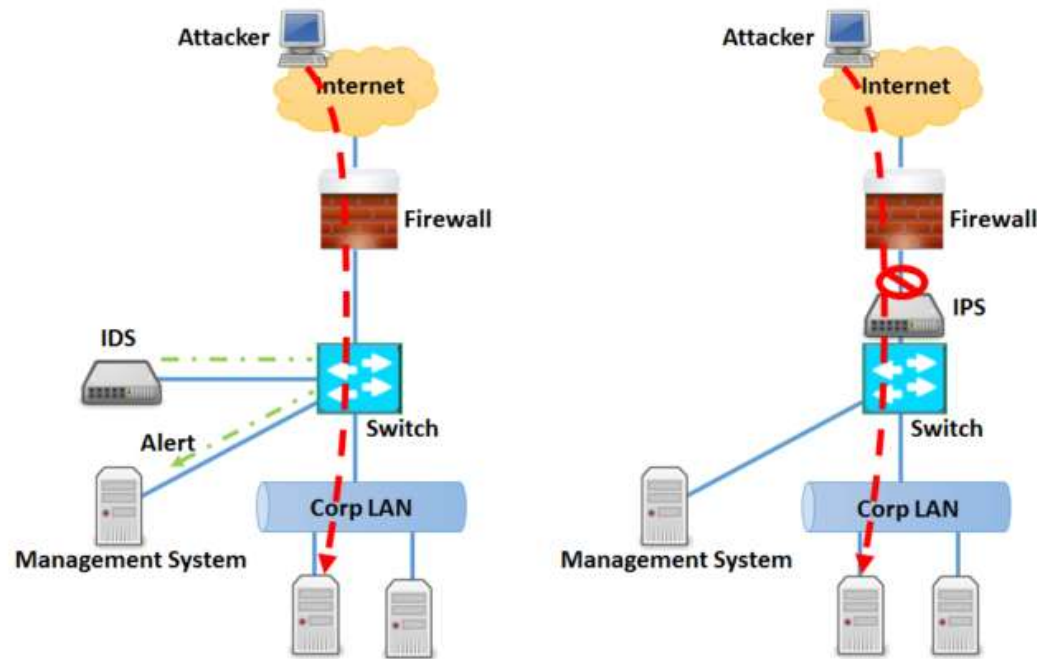
Penetration Testing



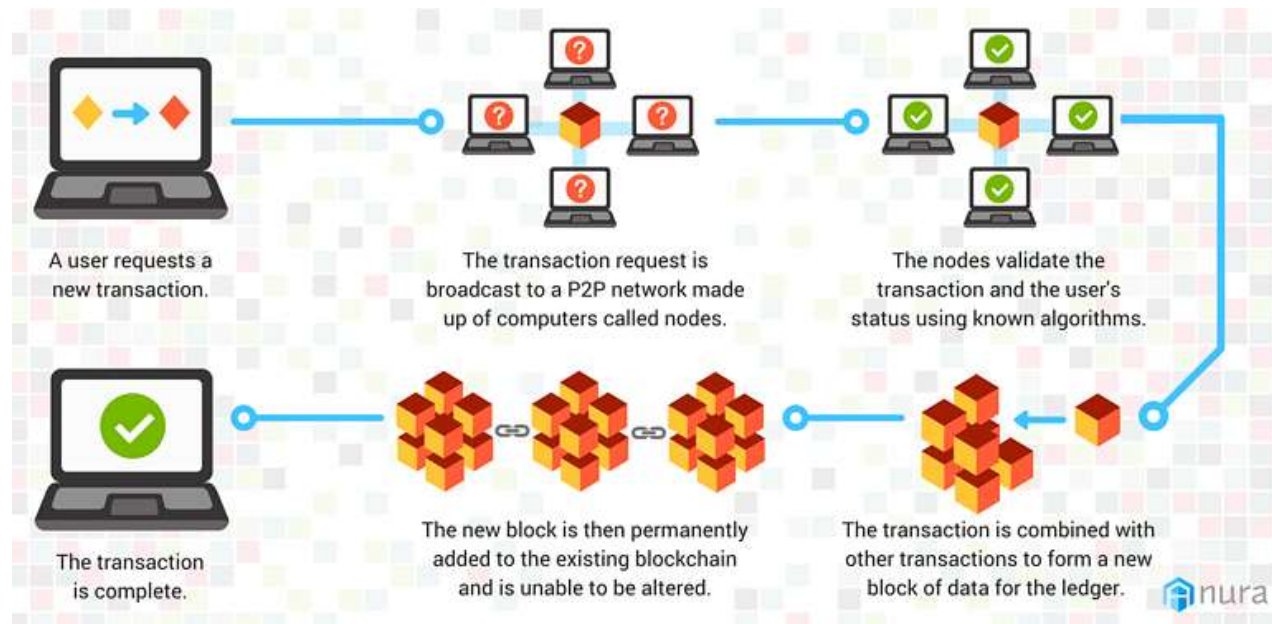
Cyberforensics



Security Solutions



Blockchain



AICTE Thrust Areas

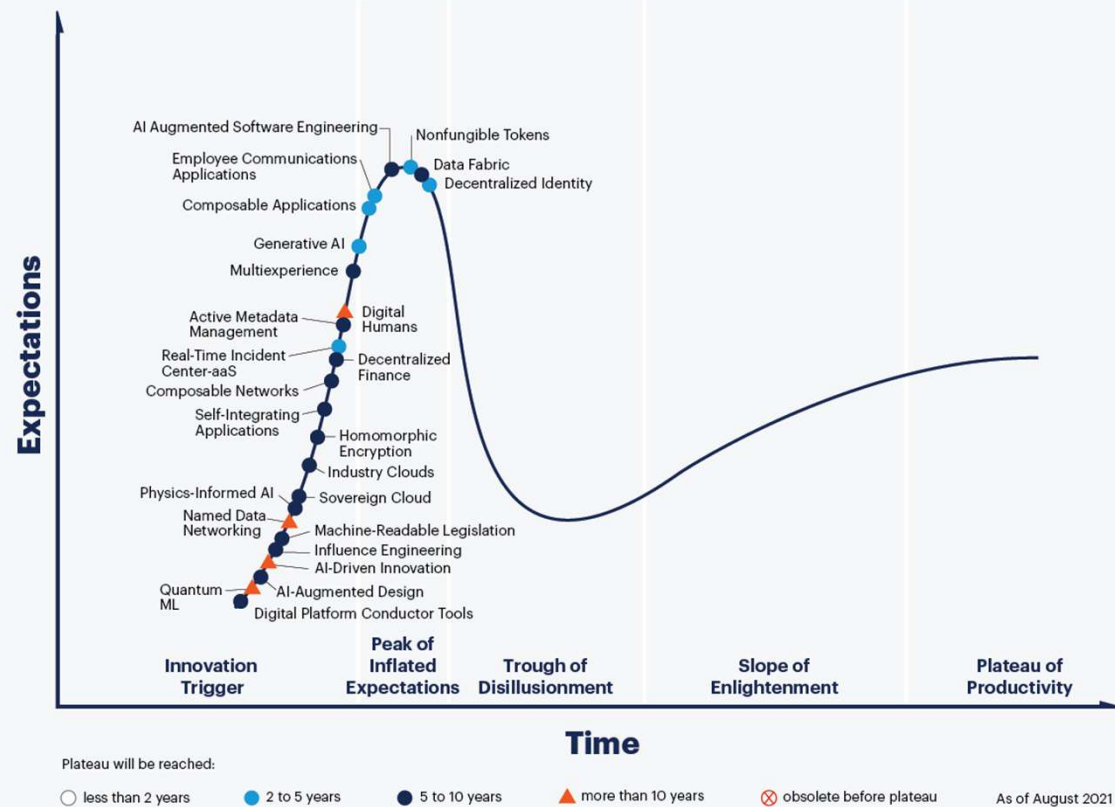
1. Artificial Intelligence
2. Internet of Things (IoT)
3. Block chain
4. Robotics
5. Quantum Computing
6. Data Sciences
7. Cyber Security
8. 3D Printing & Design
9. Augmented Reality (AR)/ Virtual Reality (VR)

Top 9 Technologies of 2022

- Artificial Intelligence and Machine Learning
- Robotic Process Automation (RPA)
- Edge Computing
- Quantum Computing
- Virtual Reality and Augmented Reality
- Blockchain
- Internet of Things (IoT)
- 5G
- Cyber Security

Gartner

Hype Cycle for Emerging Technologies, 2021

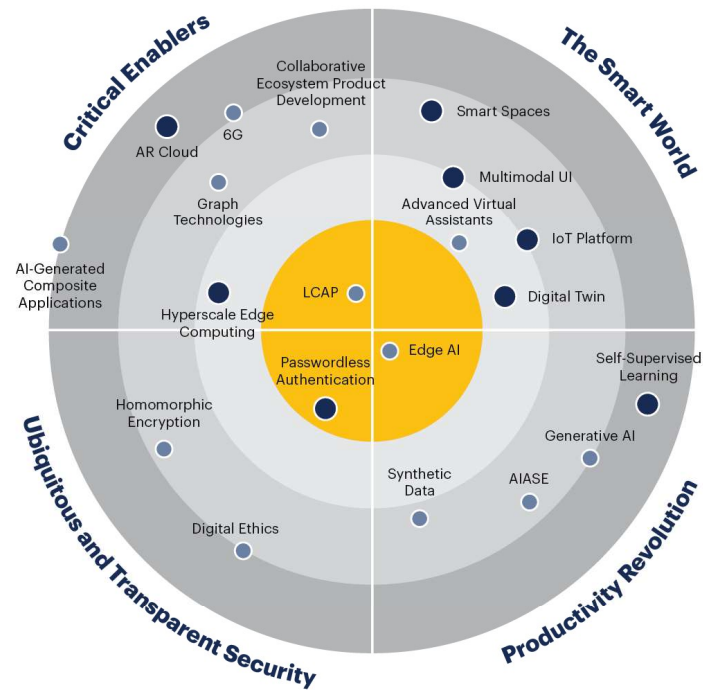


[gartner.com](https://www.gartner.com)

Source: Gartner
© 2021 Gartner, Inc. and/or its affiliates. All rights reserved. Gartner and Hype Cycle are registered trademarks of Gartner, Inc. and its affiliates in the U.S. 1448000

Gartner

Impact Radar for 2022



Range

- 6 to 8 Years
- 3 to 6 Years
- 1 to 3 Years
- Now (0 to 1 Years)

Mass





- Low
- Medium
- High
- Very High

gartner.com

Source: Gartner
© 2021 Gartner, Inc. and/or its affiliates. All rights reserved. CTMKT_1574277

Gartner

Gartner's Top Strategic Technology Trends for 2022

-  **Generative AI**
-  **Autonomic Systems**
-  **Total Experience**
-  **Distributed Enterprise**

**Accelerating
Growth**

-  **AI Engineering**
-  **Hyperautomation**
-  **Decision Intelligence**
-  **Composable Applications**

**Sculpting
Change**

-  **Cloud-Native Platforms**
-  **Privacy-Enhancing Computation**
-  **Cybersecurity Mesh**
-  **Data Fabric**








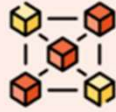

**Engineering
Trust**

© 2021 Gartner, Inc. and/or its affiliates. All rights reserved. Gartner is a registered trademark of Gartner, Inc. and its affiliates.

Gartner

Top 10 technology trends for 2020

According to Gartner

1.	2.	3.	4.	5.
Hyperautomation	Multiexperience	Democratization	Human Augmentation	Transparency and Traceability
				
6.	7.	8.	9.	10.
Empowered Edge	Distributed Cloud	Autonomous Things	Practical Blockchain	AI Security
				

Domains to Explore

- ❖ Application Security
- ❖ Business Continuity
- ❖ Cloud Security
- ❖ Data Security
- ❖ Database and Infrastructure Security
- ❖ Disaster Recovery
- ❖ End-User Education
- ❖ End Point Security
- ❖ Identity Management
- ❖ Mobile Security
- ❖ Network Security

Certifications for Beginners

- ❑ Certified Ethical Hacker (CEH)
- ❑ CompTIA Security+
- ❑ Certified Information System Security Professional (CISSP)
- ❑ Certified Information Security Manager (CISM)
- ❑ Certified Information Systems Auditor (CISA)
- ❑ NIST Cybersecurity Framework (NCSF)
- ❑ Certified Cloud Security Professional (CCSP)
- ❑ Computer Hacking Forensic Investigator (CHFI)
- ❑ Cisco Certified Network Associate (CCNA) Security

Certification	<u>Simply Hired</u>	<u>Indeed</u>	<u>LinkedIn Jobs</u>	<u>TechCareers</u>	Total
CEH (EC-Council)	2,172	2,991	5,093	1,422	11,678
CISA (ISACA)	4,582	7,130	11,455	4,130	27,297
CISM (ISACA)	3,087	4,592	7,897	350	15,926
CISSP [(ISC)2]	9,675	13,549	23,557	7,683	54,464
Security+ (CompTIA)	2,471	3,234	5,345	377	11,427

Cyber Security Job Profile

Security Specialist

Security Administrator

Security Architect

Security Analyst

Security Auditor

Security Director

Security Consultant

Security Engineer

Cryptographer

Chief Information Security Officer

Vulnerability Assessor

Incident Responder

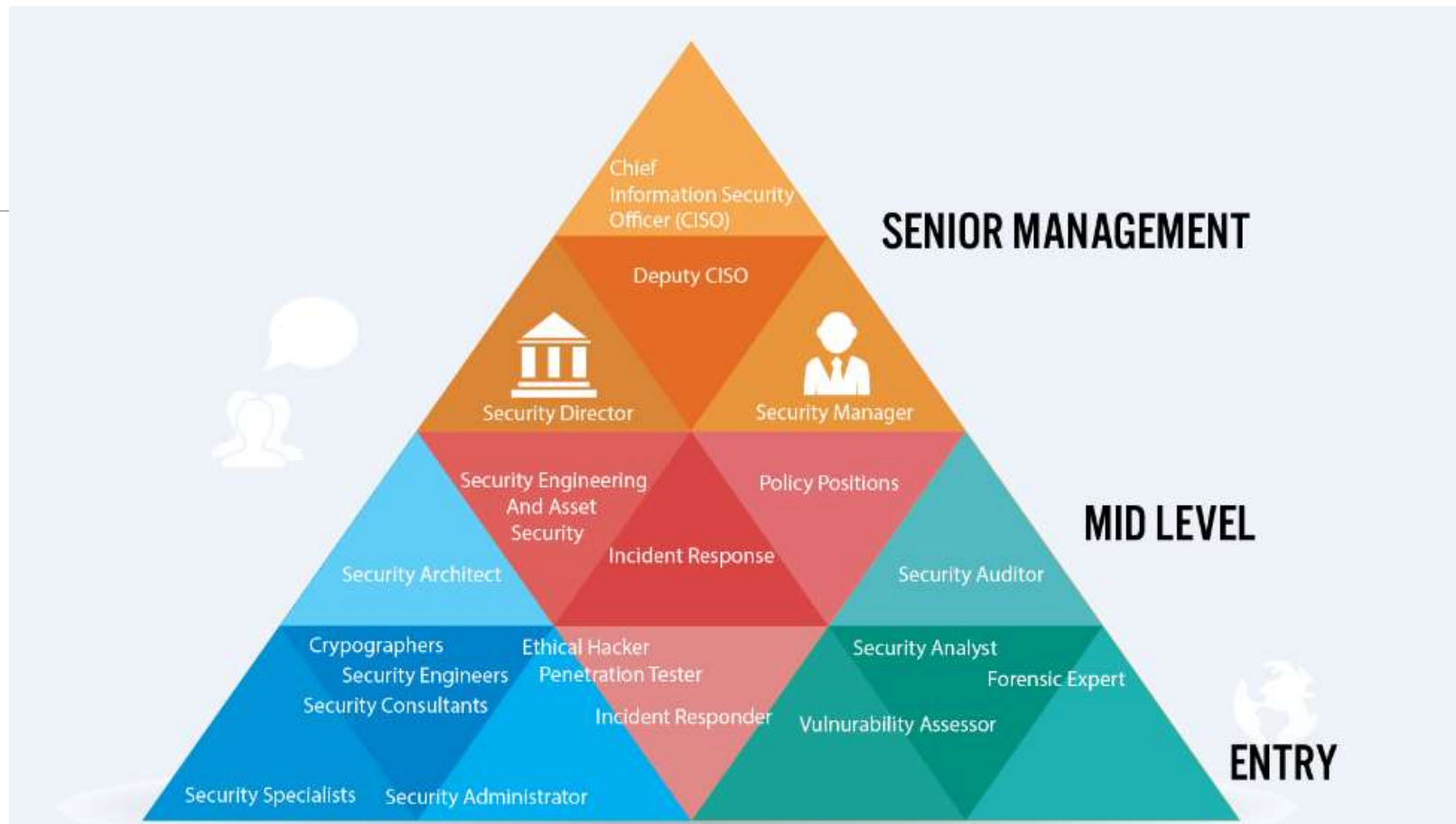
Forensic Expert

Penetration Tester

Source Code Auditor

Security Manager

Cryptanalyst



Future Scope of Cybersecurity Jobs

- ❑ Government Sectors
- ❑ Banking Sectors
- ❑ IT Product Companies
- ❑ IT Service Companies
- ❑ IT Security Companies



Thank You

A solid blue horizontal bar spanning the width of the slide, located at the bottom.