

Group D

Careers in Computer Science

Understanding Your Path



Introduction to Careers Path

- CAREER PATH AND CHOOSING A PATH
- OVERVIEW OF THE COMPUTER SCIENCE FIELD
- WHY CHOOSING CAREER IN COMPUTER SCIENCE FIELD IN MODERNIZED WORLD



Factors Influencing Careers in Computer Science Field



Career Opportunities

- Job Demand and Security
- Salary Potential
- Career Growth and Advancement



Personal Fulfillment

- Interest and Passion for Technology
- Work-Life Balance and Flexibility
- Impact and Purpose



Skill Development

- Education
- Skill Requirements
- Networking and Mentorship

Overview of Software Development

WEB DEVELOPMENT

- Building websites and web applications
- Frontend, Backend, and Full Stack options

MOBILE APP DEVELOPMENT

- Creating apps for iOS and Android
- Cross-platform vs. Native development

GAME DEVELOPMENT

- Developing interactive games for different platforms
- Unity, Unreal Engine, etc.



Sills Needed for Software Development



Web Development

- HTML, CSS
- JavaScript, TypeScript
- Backend Languages
- NodeJs (JavaScript Runtime)
- Python (often with frameworks like Django or Flask)
- PHP (used with CMS)



Mobile App Development

- React Native
- Flutter
- Xamarin (.NET/C#)
- Swift (iOS)



Game Development

- C++ (Unreal Engine)
- C# (Unity)
- Java
- Python
- Graphics Engines: Unreal Engine, Unity

A World of Data Opportunities

DATA ANALYST

- Collects, cleans, and analyzes data.
- Uses SQL, Excel, and data visualization tools.

DATA ENGINEER

- Builds and maintains data pipelines.
- Handles large datasets & complex systems.
- Strong programming skills required.

DATA SCIENTISTZ

- Combines statistics, machine learning, and domain knowledge.



The Power of Statistical Analysis and Data Interpretation



Statistical Analysis

- Framework for understanding data.
- Identifies patterns and trends.
- Enables data-driven decisions.



Data Interpretation

- Translates complex data into clear stories.
- Communicates findings to diverse audiences.
- Uses visualizations for better understanding.



Data-Driven Decision Making

- Leverages data insights for informed choices.
- Optimizes processes and strategies.
- Boosts performance and competitiveness.

Cybersecurity

A Thriving Career Path

CYBERSECURITY ANALYST

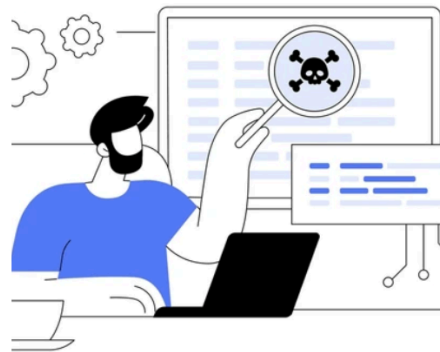
- Identifies and mitigates security risks.
- Monitors networks and responds to threats.

PENETRATION TESTER

- Simulates attacks to find vulnerabilities.
- Tests security and recommends improvements.

CYBERSECURITY ENGINEER

- Designs, implements, and maintains security infrastructure.



Essential Skills for Cybersecurity



Technical Skills

- Networking
- Operating Systems (Windows, Linux, macOS)
- Programming (Python, Java, C++)
- Cryptography
- Database Security



Soft Skills

- Problem-solving
- Critical thinking
- Communication
- Attention to detail
- Adaptability



Certifications

- CompTIA Security+
- Certified Ethical Hacker (CEH)
- Certified Information Systems Security Professional (CISSP)
- Certified Information Security Manager (CISM)