

## Ultimate Skillset Guide for CIT Students (Computer Engineering & Information Technology) – Placement Ready (2025)

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### ✓ Who is this guide for?

Students pursuing **Computer Engineering (CME)** or **Information Technology (IT)** — often referred to as **CIT** — who want to be fully prepared for **campus placements**, **internships**, and **off-campus jobs** in top companies.

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### 1 Core Subjects Every CIT Student Must Master

- **Data Structures & Algorithms (DSA)**
    - Arrays, Linked Lists, Trees, Graphs, Hashing, Sorting
  - **Object-Oriented Programming (OOPs)**
    - Inheritance, Polymorphism, Abstraction, Encapsulation
  - **Database Management Systems (DBMS)**
    - SQL, Normalization, Indexes, Transactions, ER Diagrams
  - **Operating Systems (OS)**
    - Processes, Threads, Deadlock, CPU Scheduling
  - **Computer Networks**
    - OSI, TCP/IP, Routing, IP Addressing, Protocols
  - **Software Engineering**
    - SDLC, Agile, Scrum, UML, Version Control
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### 2 Programming Skills (Compulsory)

- **C++ / Java / Python** (Choose one and master it)
- **Problem Solving**
  - LeetCode, HackerRank, GFG → Minimum 200 problems
- **Competitive Programming (Optional)**
  - For students aiming at top-tier companies (CP, ICPC, Codeforces)

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### 3 Development Track (Pick One or Two Domains)

Domain	Key Skills / Tech Stack
Web Development	HTML, CSS, JS, React, Node.js, MongoDB
App Development	Java/Kotlin, Flutter, Firebase
AI/ML	Python, scikit-learn, TensorFlow, Pandas
Cybersecurity	Networking, Linux, Burp Suite, OWASP
DevOps & Cloud	Git, Docker, Jenkins, AWS/GCP Basics
Game Development	Unity, C#, Blender (Optional track)

 Build 2-3 projects per domain and host them on GitHub or your portfolio website.

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### 4 Tools Every CIT Student Should Know

- **Git & GitHub** → Code versioning and collaboration
  - **VS Code / IntelliJ / PyCharm** → Code editors
  - **Postman** → API Testing
  - **Docker (Basics)** → Containers for deployment
  - **Figma** → UI/UX prototyping (for Web/App dev roles)
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### 5 Projects That Impress Recruiters

- Full Stack Web App (Login System, CRUD, Auth)
- Chat App using Firebase / Socket.io
- Machine Learning Project (with dataset and metrics)
- API-integrated App (Weather, News, Payment)
- Portfolio Website (with Resume + GitHub Link)

Use GitHub + Live Links + Screenshots + Documentation in your portfolio

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### 6 Soft Skills & Career Prep

- **Aptitude & Reasoning:** Use RS Aggarwal / IndiaBix / PrepInsta
  - **Resume Building:** Highlight Skills, Projects, GitHub, Certifications
  - **Mock Interviews:** Platforms like InterviewBuddy / Pramp
  - **Communication:** Explain code, logic, and projects clearly in interviews
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## Certifications that Add Value

- Google IT Support / Cloud Foundations
  - Meta Front-End Developer (Coursera)
  - AWS Cloud Practitioner
  - Data Structures in C++/Java – Udemy/NPTEL
  - Git + GitHub Crash Course
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## Final Roadmap to Get Placed in 2025

1. Learn DSA + Core Subjects (OS, DBMS, CN, OOP)
  2. Master a Programming Language (C++ / Java / Python)
  3. Pick Domain → Build & Host 2–3 Projects
  4. Resume + GitHub + LinkedIn Optimization
  5. Practice Aptitude + Interview Questions
  6. Apply for Campus + Internships + Off-Campus Drives
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**Share this with all CIT (Computer + IT) friends who want a secure, smart, and skill-based career path!**