Here's my personal **Engineering Subjects Resource Guide**,
where I've broken down all the important subjects + the exact resources I personally used to crack internships, hackathons, and job offers

This guide covers everything that actually matters for **placements** 👇

---

1. Data Structures & Algorithms (DSA)

Why it matters: It's the backbone of every tech interview — problem-solving, logic, and efficiency.
What to learn:

- Arrays, Strings, Stack, Queue, Linked List
- Trees, Graphs, Recursion, Sorting, Searching, Dynamic Programming

Type	Resource
YouTube	Striver's DSA Series (English) / CodeHelp (Hindi)
Practice	LeetCode 150 / CodeStudio / GFG "Top Interview Questions"
Tip	Focus on patterns, not memorizing solutions.
Most asked DSA interview questions	GFG and InterviewBit

---

2. Object-Oriented Programming (OOPs)

Why it matters: Every coding language & interview expects this.
What to learn:

- Classes, Objects, Inheritance, Polymorphism, Encapsulation, Abstraction
- Real-world examples using C++ / Java

Type	Resource
YouTube	Apna college, CodeHelp
Notes	Notes
Tip	Learn how to **explain** OOPs in simple language, it's often an HR-tech question.
Most asked interview questions	GFG, InterviewBit

---

3. Database Management System (DBMS)

Why it matters: It's a favorite in every company's technical round.
What to learn:

- ER Diagrams, Normalization, Joins, Transactions, Keys, SQL Queries

Type	Resource
YouTube	KnowledgeGate DBMS Series / Gate Smashers DBMS / CodeHelp
Practice	LeetCode SQL Section / GFG DBMS MCQs
Tip	Learn SQL hands-on using MySQL Workbench, not just theory.

---

4. Operating System (OS)

Why it matters: Commonly asked in every core interview — shows your CS fundamentals.
What to learn:

- Process Management, Deadlock, CPU Scheduling, Paging, Threads, Synchronization

Type	Resource
YouTube	CodeHelp
Notes	Notes

Tip	Draw diagrams for each concept — memory management, process flow, etc.
Most asked interview questions	InterviewBit, Naukri

---

5. Computer Networks (CN)

Why it matters: Helps in understanding how systems communicate — vital for backend/dev roles.
What to learn:

- OSI & TCP/IP Models, IP Addressing, Protocols, Routing, Switching

Type	Resource
YouTube	Neso Academy CN Series / Gate Smashers CN
Most asked interview questions	InterviewBit & GFG
Tip	Watch animations, it helps visualize how packets move across networks.

---

6. Development

Why it matters:
Because companies love candidates who can **build things**, not just solve problems on paper.
Development proves your creativity, problem-solving, and end-to-end understanding of how tech works.

Learn any one of the technology:

- Web Development → HTML, CSS, JavaScript, React, Node.js, MongoDB
- App Development → Flutter or React Native
- AI/ML → Python, NumPy, Pandas, Scikit-learn, TensorFlow
- Blockchain → Smart Contracts, Solidity, Ethereum Basics

Type	Resource
YouTube	CodeWithHarry Web Dev Series / WS Club Tech
Tip	Pick one domain, build **2–3 real-world projects**, and host them online, it'll make your resume stand out instantly.

⚡ How to Use This Guide

- Pick **one subject per week** → watch → summarize notes → revise weekly.
- Once you finish these, 90% of your **placement-level technical prep** is done.
- You can apply the same topics for **internship interviews, coding rounds, and projects.**

Stay consistent, these subjects are your foundation.
Master them, and you'll fly through any **technical interview or coding test**

— Ankit 😇