

## ■ Resume-Screening Roadmap (6–9 Months)

### Phase 1 (Month 1–2): Strengthen Core Foundations

#### ■ What to Learn

- DSA & Problem Solving: Practice 2–3 problems daily (LeetCode + Codeforces). Focus on Trees, Graphs, DP, Greedy, Bit Manipulation. Goal → Reach 1700+ Codeforces + 1850+ LeetCode.
- CS Fundamentals: OS (Scheduling, Deadlocks, Paging), DBMS (SQL queries, indexing, transactions), OOP (SOLID, design patterns), CN (TCP/IP, HTTP/HTTPS).

#### ■ What to Build

- SQL Project: Library Management / Airline Booking DB schema with queries.
- OOP Project: Design a Parking Lot / Library System in C++/Java.

### Phase 2 (Month 3–4): Full-Stack Development

#### ■ What to Learn

- Backend: Node.js, Express.js, MongoDB/PostgreSQL, JWT authentication, sessions, REST APIs, WebSockets.
- Frontend: React/Next.js, TypeScript, Tailwind.
- Deployment: GitHub, Vercel/Netlify, Render/Railway.

#### ■ What to Build

- Talkify (Real-time Chat App): Next.js, Express, MongoDB, WebSockets. Features: Auth, real-time messaging, group chats.
- Expense Tracker: MERN + Chart.js/Recharts. Features: Add/remove expenses, monthly reports, login system.

### Phase 3 (Month 5–6): AI + System Projects

#### ■ What to Learn

- AI/ML Integration: Basics of OpenAI API/HuggingFace, LangChain.
- System Design (LLD): Class diagrams, design patterns, small designs (rate limiter, cache).

#### ■ What to Build

- AI Project: Om Tours (AI Itinerary Generator) or Feedback 360 (Sentiment Analyzer).
- System/Infra Project: Task Scheduler (FCFS, RR, SRTF in code + UI) or mini DB clone.

### Phase 4 (Month 7–9): Resume Polish + Extra Edge

#### ■ What to Learn

- DevOps Basics: Docker, GitHub Actions (CI/CD), AWS basics (S3, EC2).
- System Design (HLD): Scalable apps like URL shortener, Instagram.

#### ■ What to Build

- Geo-Location App (BrewNet): Match people nearby with mutual consent.
- Portfolio Website: Next.js + Tailwind to showcase projects and achievements.

### ■ By End of 9 Months, You'll Have:

- Strong DSA profile (CF + LC ratings, contest ranks).
- 3–4 diverse, polished projects (Full stack, AI, System, Open Source).
- Solid CS fundamentals (OS, DBMS, OOP, CN, System Design).
- Resume with ATS keywords (React, Node.js, MongoDB, PostgreSQL, REST API, Docker, AWS).
- GitHub + Portfolio + Project Deployments → recruiter-clickable.