

AVINASH RAJ

Software Engineer

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🔗 Portfolio

PROFESSIONAL SUMMARY

Full-stack software engineer specializing in React, Next.js, Node.js, and PostgreSQL. Computer Science graduate with hands-on experience shipping production-grade features including realtime messaging, authentication, and database-driven web applications. Strong algorithmic foundation with 600+ DSA problems solved and GATE 2025 (CSE) qualified.

TECHNICAL SKILLS

Languages

JavaScript, C++, Python, SQL, C

Frontend

React.js, Next.js, Tailwind CSS, Chakra UI

Backend

Node.js, Express.js, REST APIs, Next.js Server Actions

Databases

MongoDB, PostgreSQL, Supabase

Core CS

Data Structures & Algorithms, DBMS, OS, OOP

Professional Experience

Software Development Intern, *TechNova Solutions Private Limited, Noida* 06/2025 – 06/2026

- Worked with the Software Development Team on designing, developing, testing, and maintaining web-based applications.
- Developed front-end features using **React.js, Next.js, and Tailwind CSS**.
- Built and integrated **REST APIs** using **Node.js and Express.js**.
- Worked with databases including **PostgreSQL and MongoDB**.
- Implemented responsive user interfaces and improved application performance.
- Collaborated with cross-functional teams in an Agile environment.

PROJECTS

AI-Powered Exam Preparation Platform (GATE) 📄 06/2026 – Present

Python, pgvector, Hugging Face, Next.js, PostgreSQL

- Architected an end-to-end **Retrieval-Augmented Generation (RAG)** system in Python to automate the ingestion, OCR extraction, and cleaning of raw educational documents.
- Implemented semantic chunking and generated vector embeddings, storing them in **Supabase (PostgreSQL with pgvector)** to enable blazing-fast similarity search over course materials.
- Built a robust backend architecture integrating **Next.js API routes** and **Supabase** for secure, scalable data storage and user management.
- Utilized **Hugging Face Transformers** to integrate AI models directly into the pipeline for advanced educational assistance.
- Developed automated scripts to manage inventory, clean extracted text, and seamlessly sync curriculum data between the Python processing pipeline and the web application.

Next.js Web Calculator Suite [↗](#), *Next.js, React, Tailwind CSS, Node.js, Resend API* 05/2026 – Present

- Built a full-stack Next.js application featuring 40+ calculators, utilizing complex React state management for real-time, client-side data processing.
- Designed and developed a responsive, premium user interface from scratch using Tailwind CSS.
- Implemented secure backend workflows using Next.js Server Actions and the Resend Node SDK to parse incoming FormData and automate transactional email delivery.

NextMatch [↗](#), *Full-Stack Realtime Dating Platform*

- Tech Stack: Next.js, React.js, Prisma, PostgreSQL, NextAuth, Tailwind CSS, shadcn/ui
- Built a realtime chat system on Supabase Broadcast + Presence with sub-200ms message delivery, typing indicators, read receipts, and online presence.
- Bridged NextAuth to Supabase Realtime via server-signed HS256 JWTs; implemented
- optimistic UI with multi-tab sync and mutual-match authorization in server actions.

GitHub Tracker [↗](#), *Developer Analytics Dashboard*

- Tech Stack: React.js, Chakra UI, GitHub REST API
- Built a responsive analytics tool to fetch and visualize GitHub user data — stars, forks, watchers, and activity metrics.
- Optimized REST API calls to cut redundant requests and designed a structured Chakra UI layout for fast, accessible browsing.

ACHIEVEMENTS

Solved 600+ Data Structures and Algorithms problems across competitive platforms

- LeetCode [↗](#) : Contest rating (1517)
- CodeChef [↗](#) : 3-star (1507)
- GeeksforGeeks [↗](#) : Best Institute Rank (58)

Qualified GATE 2025 (Computer Science and Engineering)

HackerRank 5-star certifications in C++, Python, and SQL [↗](#)

EDUCATION

B.Tech — Computer Science & Engineering

2020 – 2024 | Jalandhar, India

Lovely Professional University (LPU), Jalandhar

- CGPA: 7.03

Higher Secondary Education (Science), Marigold Public School, Delhi

2017 – 2019 | Delhi, India

- 64.2%

CERTIFICATIONS

- Data Structures & Algorithms (GeeksforGeeks) [↗](#)
- C++ Programming: Beginner to Advanced (Udemy) [↗](#)
- Oracle SQL (Udemy) [↗](#)