

NIKHIL KUMAR

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github.com/Nikhil-Kumar44 leetcode.com/u/_Nikhilkumar/ portfolio

Summary

Final-year Computer Science and Engineering student proficient in C++, Java, Python, and full-stack web development using React.js and Node.js. Strong foundational knowledge in Data Structures and Algorithms (DSA), Object-Oriented Programming (OOP), and Database Management Systems (DBMS). A proactive problem-solver eager to apply technical skills to develop innovative, user-centric software solutions.

Skills

Programming Languages : C++, Java, C, Python

Web Technologies : HTML, CSS, JavaScript, React.js, Node.js

Databases : MySQL, MongoDB

Tools & Platforms : Git, GitHub, VS Code

Core Concepts : Data Structures, OOP, DBMS

Projects

QueryMind | *FastAPI, Python, Vanilla JS, HTML/CSS, Google Gemini, MySQL, LangChain* | Live | GitHub **2026**

- Built a full-stack application that converts **natural language queries** into executable **MySQL statements** using **Google Gemini** and **LangChain**, enabling real-time data retrieval without manual SQL writing.
- Developed a scalable **FastAPI backend** for prompt engineering, SQL validation, and asynchronous query execution, ensuring efficient and reliable API performance.
- Engineered a secure query validation layer using **regex-based SQL parsing**, restricting execution to safe **SELECT** statements and preventing destructive operations like **DROP** and **DELETE**.
- Designed a responsive **glassmorphism UI** using **Vanilla JavaScript, HTML, and CSS** for dynamic schema input and real-time result visualization.
- Deployed the application on **Render**, ensuring reliable cloud-based access with optimized backend performance.

CollabCode | *React, TypeScript, Node.js, MongoDB, Socket.io, Monaco Editor* | Live | GitHub **2025**

- Developed a **real-time collaborative code editor** enabling multiple users to simultaneously write, edit, and view code in a shared environment.
- Implemented **WebSocket-based communication** using **Socket.io** to synchronize code changes across clients with low latency, ensuring seamless collaboration.
- Integrated the **Monaco Editor** (VS Code engine) to provide a rich in-browser coding experience with syntax highlighting and advanced editing features.
- Built a secure authentication system using **JWT** and **bcrypt**, enhanced with **Helmet** and rate limiting to prevent common security vulnerabilities.
- Incorporated **AI-powered code suggestions** using Google Gemini to enhance developer productivity within the editor.

Education

B.Tech in Computer Science and Engineering **2022 – 2026**

GL Bajaj Institute of Technology and Management, Greater Noida

Current CGPA: 8.6/10

Intermediate (12th Grade)

BK Senior Secondary School, Bulandshahr, UP

2020 – 2021

Percentage: 85%

High School (10th Grade)

BK Senior Secondary School, Bulandshahr, UP

2018 – 2019

Percentage: 88%