Abhinav Jain

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Education

VELLORE INSTITUTE OF TECHNOLOGY, Bhopal

2022-2026

B-TECH IN COMPUTER SCIENCE CGPA:8.45/10

Relevant Coursework: Computer Science fundamentals, Network Programming (TCP/IP protocols), Object Oriented Programming, Databases, Discrete Mathematics, Data Structures and Algorithms, Operating Systems, Computer Networks, Machine Learning

Professional Experience

NewsSailor June-2025

Full Stack Developer

- Architected and deployed a full-stack news aggregation platform, handling end-to-end system design and deployment.
- Developed automated news ingestion pipelines, processing 2,400+ articles daily across 10+ categories via scheduled backend jobs.
- Structured and exposed RESTful APIs for efficient news content management, distribution, and client integration.
- Built scalable backend infrastructure with Node.js and Express.js, incorporating scheduled tasks and real-time data processing.
- Engineered a robust scheduling and polling system, achieving 91.67% daily content coverage with minimal latency.
- Implemented intelligent duplicate detection using an 85% similarity threshold, reducing redundant data storage.
- Created high-throughput data processing pipelines, reliably handling 200 articles per 2-hour cycle.
- Composed and optimized database schema and indexing strategies for efficient news article storage and retrieval in MongoDB.

HacktoberFest 2024 Oct-2024

GoHacktober

- Completed HacktoberFest 2024 and was recognized as the top contributor by contributing to ACM_JEC repositories.
- Built the front-end architecture for complex web applications using ReactJS, implementing responsive, pixel-perfect designs that improved mobile user engagement by 35%. Integrated APIs for seamless data flow, reducing load times by 40%.
- Optimized performance and modularity by leveraging React's component-based architecture, leading to a 25% reduction in component load times and improving code reusability across the application.
- Merged 6+ pull requests, significantly enhancing project functionality and code maintainability, while reducing reported bugs by 30% through team collaboration.

Projects

1) Patient Health tracker - Self Project, Tech Stack: React, JavaScript, Node.js, Express, MongoDB, Git, Axios,

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- Codified a full-stack AI-powered health tracking system to address technological gaps in over 54,000 Indian hospitals, where 80% of public facilities lack adequate digital infrastructure.
- Crafted and integrated user-friendly interfaces in React for features like patient registration, health record viewing, and appointment scheduling.
- Automated patient reminders using node-cron and Nodemailer, resulting in more timely follow-ups and increased appointment adherence.
- Created a **searchable medicine database using Express and Node.js**, incorporating detailed product information and price, improving user engagement and reducing search time by 60%.
- Integrated a MongoDB database with Mongoose to securely store and manage user health data, improving data retrieval speed.

2) Path Finder - Self Project, Tech Stack: Data Structures and Algorithm, Html, CSS, JavaScript

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- Formed an interactive pathfinding application leveraging Dijkstra's algorithm and advanced graph data structures to compute shortest routes between cities.
- Actualized algorithmic optimizations (e.g., priority queue enhancements, early termination) to streamline route calculations and reduce computational overhead.
- **Shaped a modular architecture** separating graph modeling, path computation, and user interaction layers, improving code maintainability and scalability.
- Conducted rigorous performance tuning and testing, resulting in significantly faster route determinations and enhanced overall user engagement.

3) Quiz Master Web APP - Team Project, Tech Stack: Html, CSS, JavaScript, React, Node Js

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- Build an online quiz portal for VIT Bhopal students, earning an 'A' grade, boost learning efficiency by 40% and boost student engagement by 25% through interactive quizzes.
- Styled and initiated a real-time leaderboard function that tracks user performance on quizzes.
- Maintained a database of more than 100 quiz questions on various programming topics like C++, Python.

Skills and Technologies

Programming Languages: Java, C++, Python, JavaScript, TypeScript, SQL, HTML5, CSS

Technologies/Frameworks: React, Node JS, Express, Next JS, Zod, Tailwind CSS, Ajax

Developer Tools: Git, GitHub, Docker, Vercel, Firebase, Appwrite, MongoDB, PostgreSQL

Industry Certified Courses

- 1. <u>Google Cloud Study Jams</u>-Google Cloud Skill Boost: Learned about cloud based google technologies through study party events. From containerizing applications to data engineering
- 2. <u>The Bits and Bytes of Computer Networking</u>-Google: Learned everything from the fundamentals of modern networking technologies and protocols to an overview of the cloud applications and network troubleshooting.
- 3. <u>Introduction to Front-End Development-Meta:</u> Completed the course produced by the software engineering experts at Meta for a career as a front-end developer.
- **4.** <u>Cloud Computing</u> -NPTEL: This course introduced various aspects of cloud computing, including fundamentals, management issues, security challenges and future research trends. course.