

Aman Singh Chauhan

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EDUCATION

JIMS Engineering Management Technical Campus, GGSIPU Affiliated
Bachelor of Technology in Computer Science Engineering

Aug 2022 – July 2026
8.3 / 10 CGPA

TECHNICAL SKILLS

Languages: Python, C/C++, JavaScript, TypeScript, SQL, HTML/CSS
Frontend: React, Next.js, Redux Toolkit, Tailwind CSS, ShadCN/UI
Backend: Node.js, Express.js, REST APIs, BullMQ, Docker
AI/ML: Cohere, Qdrant Vector DB, Gemini API, LangChain, RAG Pipelines
Databases & Tools: MongoDB, PostgreSQL, Redis, Git, Postman

PROJECTS

Ask My PDF | *Next.js, Node.js, Docker, BullMQ, Cohere, Qdrant, Gemini API* [GitHub](#)

- Built **RAG-based PDF QA system** with vector embeddings via Cohere and Qdrant; optimized chunking strategy reducing query latency by **35%**.
- Architected Node.js backend with **BullMQ parallel workers** for async PDF processing, increasing ingestion throughput by **50%** (from 10 to 15 PDFs/min).
- Developed Next.js chat interface with Clerk auth and streaming Gemini responses, achieving **40%** faster time-to-first-token via chunked SSE.
- Containerized application with **Docker Compose** for local development; deployed on Vercel with **99%** uptime.

The Blog Spot | *React, Tailwind CSS, Appwrite, EmailJS, React Hook Form* [GitHub](#)

- Developed modular blog platform with **lazy-loaded components** and code-splitting, reducing initial bundle size by **30%** and improving LCP.
- Implemented EmailJS integration with **exponential backoff retry logic**, reducing failed message deliveries by **25%**.
- Built auth-aware routing with **protected route guards** and token refresh, eliminating unauthorized redirects and improving session stability by **40%**.
- Integrated **React Hook Form** with Zod validation, reducing form submission errors by **60%** and improving UX.

Veloura | *Node.js, Express, MongoDB, EJS, NodeMailer* [GitHub](#)

- Developed luxury e-commerce backend with **EJS template caching** and optimized MongoDB aggregation pipelines, reducing SSR load time by **35%**.
- Built admin dashboard with **MongoDB compound indexes** for product queries, cutting inventory upload time by **50%** across **500+ SKUs**.
- Implemented **JWT authentication** with bcrypt hashing, wishlist/cart modules with **Redis session caching**, reducing API response latency by **25%**.
- Integrated **NodeMailer** for transactional emails (order confirmations, password resets), handling **100+ emails/day** with **98%** delivery rate.

ACHIEVEMENTS

- Contributed to **Amazon ML Hackathon**: preprocessed **50,000+ data points**, implemented feature normalization improving model accuracy by **12%**.
- Secured **3rd position** in college UI/UX Design Challenge; designed Figma prototypes adopted by **2 student projects**.
- Solved **300+ DSA problems** on LeetCode and GeeksforGeeks; proficient in arrays, trees, graphs, and dynamic programming.
- Active open-source contributor with **15+ GitHub repositories**; **50+ commits** in personal and collaborative projects.