Dhruv Sharma

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EDUCATION

B.E. in Computer Engineering, Sardar Vallabhbhai Patel Institute of Technology | 2022 - 2026 | **CGPA 8.02**

12th Science (HSC), SSV School 2 (GSEB) | 2022 | **78.76%**

10th (SSC), SSV School (GSEB) | 2020 | **81.16%**

SKILLS

CS Fundamentals: Data Structures and Algorithms, LRU/LFU caching
Languages: Java, Python, JavaScript, TypeScript, SQL
Frameworks and Libraries: FastAPI, Node.js, React.js, Next.js, Tiptap, Tailwind CSS
Databases and Backend: MySQL, MongoDB, REST APIs, JWT
Tools and Technologies: Git, Linux

EXPERIENCE

Full Stack Developer Intern, Agilescript Innovations Private Limited | Jan 2026 - Apr 2026

- Led a team of 6-7 interns while owning the **architecture**, **backend** and data layers of two production Next.js 16 / TypeScript and **Supabase** applications; guided interns on the UI and an AI chatbot.
- Designed a **role-based access control** (RBAC) admin panel, a generic database manager and secure Supabase authentication.
- Built a production-ready web portal from scratch using Next.js, implementing modern frontend architecture and best practices.
- Implemented **SEO-friendly** rendering with a focus on **performance**, **discoverability** and **maintainable** design.
- Integrated Supabase to handle user interactions and internal workflows, enabling reliable forms and notifications.

Full Stack Intern, Pintube Ltd (Remote, UK-based) | Mar 2024 - Sep 2024

- Created a full-stack web application using Angular, Node.js and MongoDB; later migrated to MySQL, reducing complex query latency by ~30%.
- Designed and implemented modular, scalable REST APIs secured with **JWT authentication**.
- Integrated **AI services** into backend workflows via structured API layers.
- Accelerated background music playback service by passing prefetched data to the background process, reducing feature latency by ~30-35%.

PROJECTS

CAPIS: Redis-compatible in-memory key-value store in Java | **github.com/MrD0511/capis**

- Built a Redis-compatible server from scratch in Java: a single-threaded, non-blocking **java.nio** event loop, a **RESP parser**, 37 commands across five data types, **MULTI/EXEC transactions** and pipelining. **Works with redis-cli**.
- Implemented **LRU** and **LFU caches** over doubly linked lists, with **TTL expiry** through lazy deletion and a randomized sampling sweep; added per-connection error isolation.
- Benchmarked with redis-benchmark: **60K-67K requests/sec** at ~0.37 ms p50 for GET, SET and INCR on a Core i3.

Markblox: Markdown-native CMS | **early.markblox.com** | Next.js 16, TypeScript, Tailwind CSS, Tiptap, Node.js, MongoDB

- Built a Markdown-native CMS focused on a minimal learning curve: writers edit like a document, while developers get a clean, framework-agnostic API.
- Developed a Tiptap rich text editor with Markdown round-tripping, .md export and **custom blocks** (callouts, tabbed code groups, accordions, YouTube embeds, Mermaid diagrams, tables, image upload) for flexible content creation.
- Implemented **JWT** authentication with **rotating refresh tokens**, email verification and an Axios interceptor that silently refreshes expired tokens, securing user sessions and application access.
- Built a content management **dashboard** for creating, managing and modifying content, with **per-project metadata** fields, API key management and **webhooks**, organized as feature modules over a single service layer.

CipherChats: End-to-end encrypted chat app | **cipherchats.vercel.app** | React.js, FastAPI, WebSockets, MongoDB, IndexedDB

- Engineered a secure **real-time** chat platform with **end-to-end encryption**, Google authentication and **file sharing**.
- Implemented per-conversation **public-private key pairs** with **client-side** private key **storage** and dynamic key exchange.
- Built an offline-capable messaging system using IndexedDB to queue messages and auto-resend on reconnection.

Astro AI: AI-powered astrologer | **astroai.sharmadhruv.tech** | FastAPI, React.js, Gemini API

- Built a **privacy-first AI application** where all user data is stored client-side via **IndexedDB**, with no server-side storage.
- Developed a Gemini-powered astrology engine using a modular FastAPI backend for chart analysis and contextual predictions.
- Designed a secure **inference-only server workflow**, ensuring strong data isolation and user trust.