

Ayush Singh

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EDUCATION

B.E in Computer Engineering, Vasantdada Patil Prathisthan College Of Engineering

Aug '21 — May '25
Mumbai

HSC (12th), Pace Junior Science College

85.6 % | Jun '19 — May '21
Navi , Mumbai

SSC (10th), Carmel Convent School

78 % | Apr '19
Khopoli

PROJECTS

DESIGN-IT : Collaborative Platform for Designers

[Design-it.live](#) | [Github](#)

- Developed a full-stack platform for Designers that serves **20+ RESTful API** endpoints with **JWT authentication**. Implemented the **Like/Unlike feature**, and a **real-time messaging system**.
- Built scalable backend architecture with MongoDB database featuring **6 optimized collections**, with **complex MongoDB aggregation pipelines** for like counting, user statistics, and filtering, and integrated **Cloudinary API** for secure file uploads with automatic image optimization and CDN delivery. Implemented compound **indexes** (sender-receiver-createdAt, receiver-isRead) for efficient message queries.
- Deployed production application on DigitalOcean Droplets using **Nginx reverse proxy**, PM2 process management for zero-downtime restarts, SSL/TLS encryption, and MongoDB Atlas cloud database.
- Implemented advanced frontend features, including **responsive design** across all devices, real-time like/unlike functionality with optimistic UI updates, **dynamic filtering system with URL synchronization**.
- Use Email-DemoUser@gmail.com and Password – DemoUser123 at the time of Login to see all functionalities.
- Tech Stack:**
Frontend - React.js , TailwindCSS.
Backend - Node.js , Express.js , MongoDB , JWT (For Authentication).
Cloud - DigitalOcean , MongoDB Atlas cloud database. Cloudinary.

AI-Powered Chat Backend with Subscription System.

[Live](#) | [Github](#)

- Built a backend system with **JWT + OTP authentication**, chatrooms, and AI-powered messaging using the Gemini API.
- Implemented **BullMQ queues** for asynchronous Gemini requests and **Redis caching** for OTP, Chatrooms and performance optimization.
- Added **subscription model with Stripe Sandbox**, handling upgrades/downgrades via secure webhooks.
- Implemented rate limiting** to restrict Basic users to 5 requests/day while Pro users get unlimited access.
- Built **robust error handling and validation** across endpoints, ensuring consistent status codes and secure API interactions.
- Delivered a **Postman collection with saved responses** to simplify testing and demonstrate functionality. The link attached with this project is a link of postman with response body for each and every api.
- Tech Stack:** Node.js, Express.js, MongoDB, JWT (For Authentication), Redis, Stripe, Gemini API.

Blog Application

[Live](#) | [Github](#)

- Built a blogging platform that allows users to sign up, log in, and securely manage their accounts.
- Authenticated users can create, edit, and delete blog posts using a rich text editor powered by TinyMCE, supporting images and advanced formatting.
- Used Appwrite as backend for Authentication, database, and file storage services, ensuring data security and scalability.
- State management is handled efficiently with Redux, providing a seamless user experience.
- Tech stack:** ReactJS, Tailwind CSS, Appwrite (backend as a service)

SKILLS

Programming Languages : Javascript, Html, CSS, SQL

Frameworks and Libraries : React.js, Redux, TailwindCSS, Node.js, Express.js (Restful APIs), Mongoose

Databases : MySQL, MongoDB, MongoDB Aggregation Pipeline, PostgreSQL

Cloud and Container AWS, Cloudinary, DigitalOcean, Redis, Docker

Tools and others : Git, Github, Vercel, Appwrite, JWT, Postman Software

Core Subjects OOPS, Computer Networks, DBMS

EXPERIENCE

Web Developer Trainee

May '24 — Sep '24

IBM (Skills Build)

- Built and maintained **responsive UI screens** using **HTML, CSS, JavaScript, and React.js**, ensuring seamless performance across devices.
- Integrated RESTful APIs** with front-end components, ensuring smooth data flow and reducing response time.
- Worked on **state management and dynamic rendering**, enhancing overall interactivity and user experience.

- **Collaborated in an Agile team environment**, using Git/GitHub for version control and code reviews to maintain project quality.
- **Debugged and optimized** existing features, reducing UI/UX issues and improving performance.
- **Assisted in deployment** of web applications on cloud platforms, gaining exposure to **CI/CD workflows**.

CERTIFICATIONS

Javascript , Geek fot Geeks	May '25
AWS Cloud Practitioner Certification , Geek fot Geeks	Jul '25