MOHAMMAD HAMZA

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B.Tech in Computer Science, Punjab Technical University 2022- 2026

EXPERIENCE

Farmako(Y-Combinator S20) January 2026 - July 2026
Software Engineering Intern (Backend) *Gurugram, Haryana*

- Engineered high-performance production backend services in **Go** and **Node.js**, reliably processing 15,000+ daily healthcare transactions with 99.99% uptime.
- Designed and implemented highly scalable **REST APIs** and core business logic, improving overall service latency during peak usage hours.
- Reduced patient information retrieval time by 60% by developing internal automation workflows, saving the clinical team approximately 20+ hours of manual data entry per week.
- Architected robust **GitHub Actions CI/CD** pipelines to automate testing and deployments, successfully accelerating overall engineering delivery pipelines by **40%**.
- Engineered a **Go** based coupon validation service using Redis caching and PostgreSQL, implementing eligibility, expiry, usage-limit, and discount validation logic to support reliable real-time checkout workflows.

SKILLS

Languages:	C++, Java, **Go**, JavaScript, TypeScript, Python, SQL, Bash
Backend:	**Node.js**, Express.js, Go, Django, Flask
Databases:	**PostgreSQL**, MongoDB, **Redis**, Prisma
Cloud:	AWS, **Docker**, Linux, GitHub Actions, CI/CD
Tools, Testing:	Git, GitHub, Postman, Playwright, Swagger/OpenAPI

PROJECTS

Real-Time Flight Tracker GitHub

- Built a real-time flight tracking platform using **Node.js**, Express, Socket.IO, and **React Native**, streaming live aircraft data from the OpenSky Network to connected clients.
- Implemented a 10-second polling and data-processing pipeline that filters airborne aircraft by altitude, velocity, and coordinates before selecting and broadcasting the fastest active flights.
- Built an interactive React Native map interface with animated flight markers, altitude information, connection status, and a Leaflet-based web dashboard; containerized the backend with **Docker** for deployment.
- Implemented concurrent flight-data fetching with **Axios** and asynchronous processing, transforming OpenSky API responses into normalized flight objects and efficiently broadcasting updates through Socket.IO while handling API failures and disconnected clients.

Ollive Chatbot GitHub

- Built a full-stack AI chatbot using **React**, **Node.js** and Google Gemini, supporting real-time conversational interactions and Markdown-rendered responses.
- Integrated the **Gemini API** with a custom inference layer to capture model latency, token usage, request status, and error metrics for every AI interaction.
- Designed a relational **SQLite** data model for chat sessions, messages, and inference logs, enabling persistent conversation history and LLM performance tracking.
- Containerized the application with **Docker** and **Nginx**, using a multi-stage frontend build and Docker Compose for reproducible full-stack deployment.