

MOHAMMAD HAMZA

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B.Tech in Computer Science, Punjab University

2022- 2026

EXPERIENCE

Farmako(Y-Combinator S20)

June 2025 - Dec 2025

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 (Golang), JavaScript, TypeScript, Python, SQL, Bash
Backend: Go, Node.js, Express.js, Django, Flask
Databases: PostgreSQL, MongoDB, Redis, Prisma
Cloud: AWS, Docker, Kubernetes, Linux, GitHub Actions, CI/CD
Testing: Postman, Playwright, Git, GitHub, Swagger/OpenAPI

PROJECTS

LinkPulse ([Try it here](#))

- Architected a production-inspired **REST API** for URL shortening and analytics, incorporating API key authentication, idempotency, rate limiting, caching, and versioned endpoints following REST best practices.
- Optimized backend scalability by implementing token-bucket rate limiting, LRU cache with TTL, indexed **PostgreSQL** schemas, and efficient query patterns to minimize latency and database contention.
- Constructed a scalable URL shortener and analytics platform to manage high-throughput API requests, featuring robust API key authentication, link expiration, and pagination.
- Developed the backend architecture using Next.js, **TypeScript**, and **Prisma** ORM with Zod-based validation, ensuring a reliable and type-safe API implementation.

Go-cli ([Try it here](#))

- Built a production-inspired authentication service in **Go** featuring secure credential management, MFA workflows, session management, and persistent storage, following backend security best practices.
- Containerized the complete application stack using **Docker** and **PostgreSQL**, applying multi-stage image optimization and environment-based configuration to streamline local development and deployment.

ACHIEVEMENTS

- Finalist in a government hackathon; collaborated with multi-disciplinary teams to deliver community-focused solutions.
- Secured **6th** university rank in problem solving; **1500+** LeetCode rating with **400+** DSA problems solved.