

Amaan Pathan

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EDUCATION

University of Lucknow

Bachelor of Technology in Computer Science Engineering

Lucknow, India

2022 – 2026 (CGPA: 8)

EXPERIENCE

Open Source Contributor - BookBrainz

Jan. 2026 – Mar. 2026

Remote

- Refactored the Docker Compose setup for the BookBrainz project by replacing outdated external wait-scripts with Docker-native health checks for PostgreSQL, Elasticsearch, and Redis services.
- Diagnosed and fixed failing GitHub Actions CI workflows caused by Docker version incompatibilities with ubuntu-latest runners.

Software Engineer – NIAT (Freelance / Contract)

Sep. 2025 – Oct. 2025

Remote

- Designed RESTful backend services for an internal platform with 500+ active users.
- Built authentication, RBAC, and a RAG pipeline, improving query accuracy by 35%.
- Optimized API response times to < 120ms under concurrent load.

Open Source Contributor – Guidefox

Oct. 2024 – Jan. 2025

Remote

- Added Zod-based validation across 20+ backend APIs, reducing errors by 40%.
- Introduced DTO-based API contracts, reducing duplicated backend logic by 30%.
- Improved test coverage from 55% to 80% using unit and integration tests.

PROJECTS

Hermes - Automation Platform | Golang, PostgreSQL, Redis, Docker 🚀

Jan. 2026 – Mar. 2026

- Built a scalable workflow automation engine enabling multi-step automations.
- Designed an event-driven backend with distributed workers handling 1,000+ jobs/hour.
- Implemented retries, idempotency, and failure isolation for workflow execution.

HTTP Server from Scratch | Golang, TCP, HTTP/1.1 🚀

Oct. 2025 – Nov. 2025

- Implemented a fully functional HTTP/1.1 server from raw TCP sockets.
- Handled concurrent connections using goroutines and connection lifecycle control.
- Handled 3,000 requests/second locally, validating networking and OS fundamentals.

PRISM | TypeScript, Node.js, PostgreSQL, Prisma, Docker 🚀 🚀

Dec. 2024 – Feb. 2025

- Developed backend services for a university-wide platform with 1,000+ users.
- Designed JWT-based authentication and role-based access control.
- Deployed containerized services with Nginx and SSL, achieving 99%+ uptime.

TECHNICAL SKILLS

Languages: Golang, Python, TypeScript, JavaScript, SQL

CS Fundamentals & Backend: RESTful APIs, Distributed Systems, System Design, Auth, Networking (HTTP, TCP/IP), OS, DSA

Databases & Storage: PostgreSQL, Redis, MongoDB, Prisma, NATS JetStream

Infrastructure: Docker, Linux/Unix, Bash, Nginx, Cloud Deployment (AWS/Cloudflare), Kubernetes