

# SAMAMA USMAN

Islamabad, Pakistan

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## Education

### National University of Science and Technology

Bachelor of Science in Computer Science

Sep. 2023 – May 2027

CGPA 3.5/4.0

## Experience

### Indexy

Backend Engineer

Dec. 2025 – May 2026

- Owned the backend for an AI-visibility platform (Node.js/Express, TypeScript) that tracks how brands get cited across ChatGPT, Perplexity, Gemini, and Claude, using headless browser automation (Playwright/Kernel) and Kernel geo-proxies to capture how answers shift by location.
- Shipped an LLM content-generation pipeline on OpenRouter, with prompts and tracing managed in Langfuse, that produces AI-optimized articles to lift brand citation rates
- Designed async event-driven pipelines using GCP Cloud Tasks to orchestrate visibility scoring, sentiment analysis, traffic attribution, and AI content generation workloads processing 20,000+ jobs/day
- Split data across PostgreSQL for transactional records and a columnar ClickHouse store for time-series analytics, using monthly partitioning and tuned sort keys to aggregate tens of millions of visibility rows in milliseconds.
- Deployed to GCP Cloud Run via GitHub Actions CI/CD, migrated runners to Blacksmith to cut build times by 58% (from 6 to 2.5 minutes), and added tracing and monitoring with OpenTelemetry, Sentry, and Axiom.

### Spiral Technology

Software Engineer, Remote

May 2025 – Oct. 2025

- Built RAG pipelines using LangChain for orchestration and Mistral for PDF-to-Markdown conversion, powering a document-grounded chatbot.
- Developed PDF ingestion workflows with Azure OCR and Camelot for text extraction and table parsing from scanned and handwritten documents.
- Persisted processed data and embeddings in Supabase and exposed chatbot inference through FastAPI endpoints.

### Pursuit

Software Engineer Intern

Jan. 2025 – Mar. 2025

- Built a multi-tenant restaurant CRM REST API in Go (Gin) backed by PostgreSQL, using sqlc for type-safe, compile-time-checked queries and timestamped SQL migrations.
- Implemented JWT authentication with short-lived access tokens, server-side refresh tokens via HttpOnly cookies, and bcrypt-hashed credentials, with role-based access control (Admin/Manager/Staff) enforced through Gin middleware.
- Built a staff invite-and-onboard flow (invite, verify, join) with per-restaurant data scoping so one backend serves multiple locations.

## Projects

### InterviewAI | MongoDB, Express.js, React, Node.js, MERN Stack

[Live Demo](#)

- Built InterviewAI, a full-stack AI-driven platform for technical hiring with voice, coding, and system design rounds.
- Architected an async code-execution pipeline with BullMQ and Redis, decoupling the API server from workers that run submissions in Judge0's sandbox for non-blocking, horizontally scalable evaluation.

### Bideez | TypeScript, Node.js, Express, PostgreSQL, Drizzle ORM, Mastra, LlamaParse, Vapi

[Live Demo](#)

- Engineered an event-driven RFP intake layer using a Cloudflare email worker and Gmail webhooks, with retry-safe polling and deadline auto-sync to Google Calendar.
- Integrated a Vapi voice agent for post-submission rehearsal, generating buyer questions from RFP gaps and top-weighted criteria with a scored readiness report.

## Honors & Awards

1st Place, Web Development Hackathon – FAST Islamabad

Dec. 2025

1st Place, Cust Annual Hackathon (150+ teams) – Capital University of Science & Technology Islamabad Jun. 2026

## Technical Skills

**Languages:** Python, Golang, JavaScript/TypeScript, SQL

**Frameworks/Libraries:** Express.js, Node.js, NestJS, FastAPI, Django, Gin, React, Next.js, LangChain, Drizzle ORM

**Cloud & DevOps:** GCP (Cloud Run, Cloud Tasks), AWS, Docker, GitHub Actions (CI/CD), OpenTelemetry, Cloudflare

**Databases:** PostgreSQL, ClickHouse, Redis, Supabase, MongoDB, MySQL, Pinecone