

# Muhammad Shiraz Kamran

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## Education

### COMSATS University Islamabad

Islamabad, Pakistan

*Bachelor of Science in Software Engineering* (CGPA: 3.58 / 4.0)

Expected 2027

- **Relevant Courses:** Database Systems, Object-Oriented Programming (OOP), Data Structures Algorithms, Design and Analysis of Algorithms, Computer Networks, Programming Fundamentals (PF), Software Requirements Engineering, Software Design and Architecture.

## Technical Skills

Languages	Python, Java, JavaScript, SQL (PostgreSQL, sqlite), HTML/CSS
Backend	<b>FastAPI</b> , Spring Boot, Node.js, Fastify, Hibernate, JPA
AI & Data	Sentence Transformers (NLP), Vector Embeddings
Cloud	VPS handling, DigitalOcean, AWS training intro, Netlify, Supabase
Tools & DevOps	Git, Docker, PostgreSQL, Supabase, Netlify, Jira, Postman
Frontend	React.js, React Router, Tailwind CSS
Certificates & Courses	Cisco Python Essentials 2, Intro to AWS Cloud with Labs

## Projects

### Hadith Semantic Search System | *Python, FastAPI, PostgreSQL, React, Docker*

[GitHub Repository](#)

- Developing a semantic search engine for Hadith using **FastAPI** and **SQLModel**, enabling meaning-based retrieval instead of simple keyword matching.
- Using **PostgreSQL**, **NumPy** and **Sentence Transformers** to generate and store vector embeddings for accurate similarity-based searching.
- Optimized system performance by pre-loading **NumPy** embeddings into memory at startup, significantly reducing query latency and response times.

### Filebin CLI - Temporary File Sharing | *Python, Fastify (Node.js), Supabase*

[GitHub](#) · [PyPI](#)

- Developed a CLI tool for temporary file sharing using the Python **click** library and published it on **PyPI** with support for Python 3.7+.
- Built a backend using **Fastify** (Node.js) and **Supabase** to manage file metadata efficiently without needing to self-host the files.
- Implemented global rate-limiting to handle up to **4,000 requests per minute** to ensure the API remains stable under heavy traffic.

### Munch n Vibes - Bakery E-Commerce | *React.js, React Router, CSS3, Netlify*

[Live Site](#)

- Developed a multi-page **React.js** website for a home baker using a glassmorphism UI and **React Router** for smooth navigation and dynamic product routing.
- Implemented responsive layouts and deployed the application via **Netlify** and **GitHub** to handle continuous integration and automatic updates.

### Devotol - AI Developer Assistant | *JavaScript, Gemini 2.0 Flash, Netlify*

[Live Site](#)

- Built a lightweight AI assistant using **JavaScript** with a bloat free, minimal architecture to ensure fast load times and quick responses for coding prompts.
- Developed a serverless backend layer using **Netlify Functions** to securely integrate and manage requests to the **Google Gemini 2.0 Flash** model.

## Volunteering

### Gaza Relief Fundraising Campaign

*Team Co-Lead*

- Co-led a team of 5 students to execute a fundraising campaign for Civics and Community Engagement, successfully raising over **350,000 PKR** through community outreach and donation drives.