

S M AL HASIB

Software Engineer

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PROFESSIONAL SUMMARY

Results-driven Software Engineer with over 3 years of experience, transitioning from mobile development to architecting enterprise-grade AI solutions. In 2025, successfully built and deployed "FluentBot," a RAG-based customer support agent, handling the entire lifecycle from RAG architecture design to frontend implementation and DevOps automation. Expert in optimizing RAG response latency (reduced by 70%), managing vector databases, and implementing robust CI/CD pipelines.

TECHNICAL SKILLS

- **AI:** Python, LangChain, LangGraph, RAG (Retrieval-Augmented Generation), ChromaDB, Cloudflare Vectorize, OpenAI API.
- **Backend:** PHP (Laravel), Python (FastAPI/Scripts), Node.js, WebSocket (Laravel Reverb), Queues (Laravel Horizon).
- **Frontend:** Vue.js, Svelte (Vanilla), TailwindCSS, TypeScript, JavaScript.
- **DevOps & Cloud:** Docker, Kubernetes (Basic), GitHub Actions (CI/CD), Nginx, Linux (Ubuntu/Manjaro), Cloudflare (Vectorize, R2, D1, KV, AI Gateway, Workers).
- **Databases:** PostgreSQL, MySQL, Redis, SQLite.

WORK EXPERIENCE

Software Engineer (AI & Full Stack), *AuthLab*

February 2025 - Present

Lead Engineer for "FluentBot" – An AI-powered Support Agent Solution.

- **AI Architecture & RAG Optimization**
 - Architected a complete Retrieval-Augmented Generation (RAG) system initially in JavaScript (LangChain.js), later migrating to Python to leverage advanced vector database capabilities .
 - Implemented **LangGraph** and **ChromaDB** with PostgreSQL for chat memory, introducing Parent-Document retrieval and Semantic Caching via Redis .
 - **Achievement:** Reduced AI response latency by **70%** (from ~30s to 6-11s) and improved response accuracy by refining system prompts and retrieval logic .
 - Developed a "Content Gap" detection system to identify and log user queries that the bot failed to answer, enabling continuous knowledge base improvement .
- **Backend Engineering & Scalability**
 - Built a robust Laravel backend handling job queues via **Laravel Horizon** for background document processing, scraping, and indexing .
 - Integrated **FireCrawl** for advanced web scraping, optimizing the open-source docker build to reduce overhead .
 - Implemented real-time status updates for bot training and source indexing using WebSockets (**Laravel Reverb**) .
 - Designed a Role-Based Access Control (RBAC) system for team management, allowing granular permissions for bot editors and viewers .
 - Developed analytics modules to track LLM token usage, request logs, and user geography, exporting statistics for administrative oversight .

• Frontend Development & Optimization

- Developed the main application for managing bots using **Vue.js** .
- Implemented Link based sign-up, login flow (Magic Link).
- Developed administrative functionalities.
- Engineered a standalone Chat Widget using **Svelte**. Refactored the widget from using UI libraries to vanilla CSS/Svelte, reducing the JavaScript bundle size by **80%** for faster client-site loading .

• DevOps & Deployment

- Migrated deployment strategy from manual VPS setup to containerized **Docker** deployments via **GitHub Container Registry (GHCR)** .
- Established a **Blue-Green deployment** strategy to ensure zero-downtime updates during production releases .
- Automated CI/CD pipelines using **GitHub Actions** for testing, building, and deploying both backend and frontend services .
- Scripted automated hourly backups of database and vector data to **Cloudflare R2** to ensure data integrity .
- Documented migration & deployment processes and authored scripts for operational tasks (chroma cleanup, certificate renewal, backup scripts).

• Leadership & Collaboration

- Guided architectural decisions (vector DB choice, RAG language migration) and coordinated cross-discipline work with CEO, UI/UX team, and support agents.
- Led the UI migration to redesigned UX (2-month effort) and collaborated with UI/UX to match product look & feel.

Junior Software Engineer (Mobile), *InfancyIT Limited*

March 2024 - January 2025

- Developing mobile application using **Flutter**
- Built CI/CD pipeline for web & mobile applications
- Developed a backend using **Spring boot**

Trainee Software Engineer (Part time), *InfancyIT Limited*

May 2023 - Feb 2024

- Built and maintained cross platform mobile application using **Flutter**, native Android & iOS.
- Worked on in-app-purchase, google ml kit, firebase, admob.
- **MySUST (Android)**: t.ly/UTysr | **MySUST (iOS)**: t.ly/rExHa | **Wali Woo (Android)** : t.ly/HpGpx

Trainee Software Engineer (Part time), *Rangan Studio*

Oct 2021 - Aug 2022

- Built and maintained native Android applications using **Java** and **Kotlin**.
- Gained hand-on expertise on **dagger hilt**, **navigation**, **mvvm architecture** and other android libraries
- Published 1 application to play store

EDUCATION

Bachelor of Science in Computer Science & Engineering

Jan 2019 - Feb 2024

Shahjalal University of Science & Technology - CGPA 3.40 out of 4.00

VOLUNTARY WORK

- **Organizer at SUST CSE CARNIVAL 2024** - Resources & Venue Management **Team Leader**
- **Mentor (SUST ACM Student Chapter)** - Taken workshops on 'Introduction to Android using kotlin' & 'Introduction to Git & Github'
- **Technical Executive (Development)** - SUST ACM Student Chapter