

# MUHAMMAD HAMZA SAJID

## Lead Software Engineer

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## PROFILE

Lead Software Engineer with 4+ years of experience architecting and shipping 9 production systems across healthcare, insurtech, fintech, and real-time communication. Promoted from Senior to Lead Engineer within a single organisation based on consistent delivery ownership and technical leadership. Define system architecture, drive technology decisions, set engineering standards, and own full product delivery — from initial design through production release and post-launch stability. Fluent across the full stack: Node.js/Django/FastAPI backends, React/Angular/Next.js frontends, PostgreSQL/MongoDB/Redis data layers, AI integration pipelines, and AWS/Docker infrastructure.

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## PROFESSIONAL EXPERIENCE

### Lead Software Engineer (promoted from Senior)

Camden Health System • Lahore, Pakistan (On-site)

Aug 2024 – Feb 2026

- ▶ Promoted to Lead Engineer within 6 months — took ownership of technical direction, sprint planning, and architecture decisions across a portfolio of 4 concurrent production products
- ▶ Architected the full backend system design for Swaapty, BlissChat, UK Company Scraper, and MT5 Trading System — selected technology stacks, defined data models, and established API contracts before any code was written
- ▶ Led a 5-engineer team end-to-end: set coding standards, drove code reviews, resolved architectural blockers, and ensured on-time production releases via GitHub Actions CI/CD pipelines
- ▶ Designed and enforced database architecture across PostgreSQL, MongoDB, and MySQL — introduced query optimisation patterns that reduced response times on high-read production endpoints
- ▶ Owned all AWS EC2 infrastructure: architected Nginx reverse proxy configuration, Dockerised multi-service deployments, and led incident response for production environment issues
- ▶ Introduced WebSocket architecture across multiple products for real-time features — defined the integration patterns adopted by the frontend team

### Key Products Architected & Led:

**Swaapty** — *Next.js · NestJS · TypeORM · PostgreSQL · Docker · Nginx*

Real-time product swap marketplace — architected NestJS backend, designed TypeORM schema, and led full deployment pipeline. Live at [swaapty.com](https://swaapty.com).

**BlissChat** — *React.js · Django · PostgreSQL · WebSockets · Custom Admin*

Full-stack social platform — designed Django backend architecture, led WebSocket integration, and engineered a fully custom Django admin panel with page creation, approval workflows, and site-wide content management.

**UK Company Scraper** — *Python · Django · Web Scraping · PostgreSQL*

B2B intelligence tool — designed concurrent scraping architecture across 5 sources (Companies House, LinkedIn, Google, Crunchbase, D&B) with configurable limits and CSV/Excel export.

**MT5 Asian Liquidity Sweep System** — *Python · Django · MT5 · State Machine · REST API*

Algorithmic trading engine — designed a 6-stage state machine architecture, Asian range detection logic (00:00–06:00 UTC), BOS/CHOC reversal confirmation on M1/M5, and a mock MT5 service for backtesting.

## Senior Software Engineer

HurTech • Bahawalpur, Pakistan

Mar 2021 – Jul 2024

- ▶ Served as the most senior engineer on the team — independently architected and delivered 5 full-stack production applications across POS, workforce management, and client-facing platform domains
- ▶ Designed system architecture for each engagement from scratch: technology selection, database schema design, API structure, authentication flows, and deployment strategy — with no senior oversight
- ▶ Engineered RBAC systems, real-time data synchronisation layers, and end-to-end payment workflow integrations across multiple concurrent client projects
- ▶ Sole architect and developer of SecureChat — designed Clean Architecture (Domain/Data/Presentation), selected BLoC for state management, and shipped a production Flutter app with E2E encryption, auto-deleting messages, and screenshot prevention
- ▶ Owned client relationships end-to-end across 5+ engagements — led requirement discovery sessions, defined technical scope, drove iterative delivery, and managed post-launch support independently

## INDEPENDENT PROJECTS

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**HakemAI** — *AI-Powered Insurance Comparison Platform*

Next.js · FastAPI · PostgreSQL · MongoDB · PDF Extraction · AI

Sole architect and lead engineer. Designed the full system: a custom PDF extraction pipeline parsing rate tables and benefit classifications, an AI ranking model scoring plans side-by-side, and an RFQ comparison engine. Made all infrastructure decisions — executed a full production migration from AWS EC2 to a Mailcow VPS under a live client deadline, resolving PostgreSQL and MongoDB compatibility issues in production.

**Saleto** — *Personalised Email Management Platform*

Angular · Django · Redis · Celery · PostgreSQL · MongoDB

Designed and built an end-to-end email platform — architected Mailcow Postfix/IMAP/Dovecot integration for mail server control, designed Celery + Redis async task queue for reliable delivery at scale, and built full inbox management with send/receive tracking.

**SecureChat** — *Privacy-First Cross-Platform Messaging App*

Flutter · Dart · Firebase · BLoC · Clean Architecture

Sole architect and developer. Designed Clean Architecture from scratch (Domain/Data/Presentation layers), selected BLoC for state management, and shipped a production Flutter app — auto-deleting messages, screenshot prevention, SHA-256 hashed passwords, group chats, voice messages, QR-code user discovery, FCM push notifications.

## SKILLS

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**Backend:** Node.js, Express.js, Django, FastAPI, NestJS, Django REST Framework, REST APIs, WebSockets, JWT

**Frontend:** Angular, React.js, Next.js, TypeScript, JavaScript (ES6+), HTML5, CSS3, Tailwind CSS, Material UI

**Mobile & Desktop:** Flutter (Clean Architecture, BLoC, Firebase), Ionic, Electron, PWA

**Databases:** PostgreSQL, MySQL, MongoDB, Redis, PouchDB, TypeORM, Query Optimisation

**AI & Data:** PDF Extraction Pipelines, AI Ranking/Scoring, Web Scraping, Celery Task Queues, CSV/Excel Export

**Cloud & DevOps:** AWS (EC2, S3), Docker, Nginx, GitHub Actions CI/CD, Linux Server Admin, VPS Migration

**Leadership:** System Architecture, Technical Direction, Engineering Standards, Code Review, Sprint Planning

## EDUCATION

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**Bachelor of Science in Information Technology**

The Islamia University of Bahawalpur

*2021 – 2025*