

MUHAMMAD TALHA SHAIKH

Junior Full-Stack & AI Engineer

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PROFESSIONAL SUMMARY

High-velocity **Junior Full-Stack & AI Engineer** (~1.5 years intensive coding) trained through **GIAIC (Governor Sindh Initiative for GenAI & Web3)**, with a proven track record of architecting, building, and deploying production-grade web systems and AI applications solo. Mastered **Next.js, TypeScript, Python, FastAPI, and OpenAI Agent SDK / RAG** during coursework and applied projects. Architected **Botaura** (a live multi-tenant RAG chatbot SaaS registered as an official **Meta WhatsApp Tech Provider**) and **TikTok Follow Exchange** with peer verification. Dedicated to rapid skill acquisition, clean system design, and immediate engineering impact.

TECHNICAL SKILLS

Frontend: Next.js 16 (App Router, Server Components), React 19, TypeScript, JavaScript (ES6+), Tailwind CSS, Framer Motion, Responsive UI/UX

Backend & Systems: Node.js, Python, FastAPI (asyncpg), REST APIs, Webhook Handlers, JWT Authentication, Multi-Tenant Architecture (RLS)

AI & Vector Search (RAG): OpenAI SDK, OpenAI Agent SDK, pgvector (Cosine Similarity), BM25 Hybrid Retrieval, LangChain, Embeddings, Context Grounding

Databases & ORM: PostgreSQL, Neon Serverless DB, Supabase, MongoDB, Prisma ORM, Drizzle ORM, Cloudflare R2

Integrations & Tools: WhatsApp Cloud API (Meta Tech Provider), Stripe Checkout, Resend, Vercel, Docker, Git & GitHub Actions, Sentry

FEATURED SYSTEMS & PRODUCTION PROJECTS

Botaura — Multi-Tenant RAG AI Chatbot & WhatsApp Commerce SaaS [Flagship]

Founder & Solo Engineer

Live: <https://botaura.app> • Architecture: talhaweab.xyz/projects/botaura

- Architected and deployed a multi-tenant SaaS platform spanning 162+ production routes solo, enabling SMBs to train custom AI chatbots over proprietary catalogs/documents and automate WhatsApp customer sales.
- Implemented Hybrid RAG Pipeline: Integrated OpenAI embeddings with pgvector cosine similarity and BM25 search, handling multilingual English/Roman-Urdu conversations with automated confidence thresholds and human handoff.
- Accredited as Meta WhatsApp Tech Provider: Built a centralized token routing engine by phone_number_id, orchestrating webhooks, message templates, ad attribution, and delivery reconciliations without exposing per-client secrets.
- Engineered Full Commerce Automation: Implemented zero-code WhatsApp cash-on-delivery (COD) checkout, cart-recovery automations, broadcast campaigns, and universal Store API for WooCommerce/Shopify sync.

Tech: Next.js 16, TypeScript, FastAPI, Python (asyncpg), PostgreSQL (Neon), pgvector, Cloudflare R2, Clerk Auth, Resend, Meta Graph API.

TikTok Follow Exchange (getf4f) — P2P Creator Growth Platform

Full-Stack Engineer

Live Demo: <https://f4f-tiktok.vercel.app/>

- Architected an organic P2P creator exchange platform with a 24-hour delayed reciprocal task matching engine to protect creators from TikTok algorithmic shadowbans.
- Engineered screenshot proof verification and automated trust scoring with -15 penalty rules for unfollow violations.
- Implemented an automated credit economy with referral bonuses, 48-hour inactivity auto-protection, and admin seed pool cold-start mechanisms.

Tech: Next.js, TypeScript, Clerk Auth, Tailwind CSS, PostgreSQL, PWA.

Bait-ul-Kutub — Smart Library Management System (LMS)

Full-Stack Engineer

Live: <https://bait-ul-kutub.vercel.app/> • GitHub: github.com/Talha-Shaikh1

- Modeled relational database architecture in PostgreSQL via Prisma ORM with active loan lifecycles, member tiers, and real-time inventory tracking.
- Integrated OpenAI semantic search enabling natural language book queries and contextual recommendations.

Tech: Next.js, TypeScript, Prisma ORM, PostgreSQL, Tailwind CSS, OpenAI API.

The Arqa & Comforty — Headless E-Commerce Platforms

Frontend / Full-Stack Engineer

Live: <https://thearqa.com/> • Comforty: <https://t-comforty2.vercel.app/>

- Engineered performant headless storefronts on Sanity CMS with Stripe checkout and persistent global cart state, achieving 90+ Google Lighthouse score.

Tech: Next.js, Sanity CMS (GROQ), Stripe Checkout, TypeScript, Tailwind CSS.

EDUCATION & CREDENTIALS

Cloud Native Applied Generative AI & Full-Stack Engineering — Governor Sindh Initiative (GIAIC)

Ongoing

Comprehensive training in Next.js, TypeScript, Python, FastAPI, OpenAI Agent SDK, RAG pipelines, and Vector Databases.

Meta WhatsApp Tech Provider Accreditation — Verified Cloud API Integration Architecture

Verified

Intensive Project-Based Systems Development — Real-world full-stack & AI applications

2022 – Present