

MUHAMMAD TALHA

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🌐 Talha – Software Engineer | 🔄 Talha-054 - Overview

Full-stack engineer who turns coffee and chaos into scalable production systems that matter.

Air University, Islamabad (BS Aviation Sciences and Management)

Jan 2021 - Jan 2024

Byt | Texas, US | Remote - Software Engineer MERN

Dec 2025 - Present

- Architected a multi-tenant civic engagement SaaS suite (vVote, vRide, vBuddy) with org-scoped RBAC, delivering scalable voter outreach, real-time ride coordination, and comprehensive volunteer management.
- Engineered a high-performance geospatial engine using H3 indexing and Socket.IO real-time tracking; optimized operations via integrated Google Maps routing, Twilio multi-channel communication, and high-throughput CSV data pipelines.

ARC CAD SOLUTION | Remote - Fullstack Engineer (Contract)

Jan 2025 - Dec 2025 | 1yr

- Built a production-grade 3D boat customizer (React Three Fiber/Next.js); slashed payload sizes by 80% via strategic glTF compression and runtime texturing, ensuring fluid user interactions.
- Architected a robust **Cloudflare caching layer** to resolve Vercel egress constraints, significantly improving assets delivery.

Devineers Tech | Attock | On-site

Jun 2024 - April 2026 | 2y

Mid-level Software Engineer

- Led fullstack web development: designing REST APIs, server side logic, and optimized cross stack **caching strategies**.
- Architected a compliance grade, entity agnostic audit system for a welfare case management platform, field-level change tracking, JSONB snapshots, and **transaction safe writes** built to meet legal audit requirements..

Junior Software Engineer

- Engineered fullstack features for logistics and food delivery apps utilizing React, Next.js, Node.js, and multi database stacks (PostgreSQL, Supabase, Firebase, MongoDB); leveraged SSG, SSR, and ISR to optimize performance and SEO.

VMobilize – Civic Engagement SaaS Platform | 🌐 vMobilize – AI-Powered Community Mobilization Platform

Architected a robust civic tech platform for US voter outreach on a **multitenant architecture** with **org scoped RBAC**. Designed the architecture across three custom modules; **vVote** for territory canvassing with recursive turf cutting, a multilayer geocoding cache reducing API cost. Core **H3 geospatial relationship engine** mapping neighbor networks via k-ring indexing. **vRide** for real time volunteer transportation with a multifactor driver matching engine and live GPS via **Socket.IO**. **vBuddy** for volunteer pairing, capacity tracking, and outreach analytics.

Ribit Boats – Interactive 3D Boat Customizer | 🌐 RIBIT Boats - Custom Aluminum RIBs | 9ft to 45ft

Engineered a full-stack 3D boat configurator using React Three Fiber. Optimized web performance via glTF compression, lazy-loading, and scene management, **cutting 3D payload sizes by 80% (15MB to 2.5MB)** through programmatic runtime texturing. Eliminated Vercel's Fast Data Transfer bottlenecks by offloading static assets to Cloudflare for **zero-egress caching**. Delivered end-to-end architecture, integrating serverless APIs, transactional emails, and Google Analytics.

Desktop POS – Restaurant Management System | Built a cross platform desktop POS using React, Tauri, and Rust.

Configured a **Tauri sidecar** to automatically spin up a local Rust server on launch, synchronizing a mobile waiter app for tableside ordering via in memory state polling. Secured the local network with a custom **Zero Trust architecture**, implementing IP and device fingerprint rate limiting to automatically block suspicious API activity. Delivered offline capable, hardware aware routing for live kitchen printing alongside complete inventory, staff, and analytics management modules.

React, Next, Express, Node, Nest, TypeScript, Postgres, MongoDB, Firebase/Supabase, Redux Toolkit, TanStack (Query, Table, Router), ORM (Sequelize, Drizzle, Prisma), Axios, H3 Geospatial, Google Maps, Cloud (AWS, Vercel, Heroku, Render), Docker, Redis, BullMQ, Twilio, Three.js, React Three Fiber, Jest, Git, GitHub, JWT, Material UI, Tailwind, Framer Motion, Vite/Webpack, Rust, Tauri