

EPHRAIM ARSHAD

Software Engineer — Systems & Full-Stack

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SUMMARY

Full-stack engineer and sole IT lead at the Pakistan office of a US-registered multinational nonprofit. Owns the stack end to end — database design, backend and frontend development, automated testing, and deployment — across five affiliated organizations.

TECHNICAL SKILLS

Languages	TypeScript, JavaScript, Rust, Python, C++, SQL, Bash
Frontend & Mobile	Next.js (App Router), React, React Native / Expo, Tailwind CSS, Sanity CMS, Tauri
Backend & Cloud	Node.js, PostgreSQL (RLS), MongoDB Atlas, Supabase, Cloudflare R2, Docker, Linux
Tooling & Testing	Vitest, Playwright, Turborepo, Git, GitHub Actions CI/CD
AI-Assisted Dev	Claude Code, Antigravity CLI, Codex CLI, Cursor, Model Context Protocol (MCP)

ENGINEERING EXPERIENCE

Software Engineer & IT Lead — Dosti Welfare Organization

Jan 2026 – Present
Peshawar, PK

Sole engineer for the organization's internal systems and production applications, covering full-stack development, database schemas, automated testing, and deployment.

- **DWO CRM (Production):** Contact and campaign management platform for 2,000+ contacts across 5 organizations, built on Next.js and MongoDB Atlas. Includes a cron-based send queue with atomic claim/drain handling, exponential backoff, Plunk webhook ingestion, and 600+ automated tests.
- **Dosti Impact (Production):** Offline-first field app and admin console tracking 1,000+ donation boxes. Uses a client-side IndexedDB sync queue to stay usable on spotty cellular connections, with self-healing WhatsApp receipt retries and automated end-to-end tests.
- **DOORS Portal (Production):** Digital portal for one-room schools, built with Next.js and Mongoose, with private document storage on Cloudflare R2 behind an authenticated proxy. Migration scripts digitized 1,200+ legacy paper records with zero data loss.
- **Dealona Platform (Staging):** Charity-linked rewards app built with React Native (Expo) and Supabase. Wrote pgTAP-tested PostgreSQL row-level security policies and timing-safe HMAC-SHA-512 webhook verification for Safepay payment settlements.
- **Web Platforms (Production):** Two Sanity CMS-backed websites (Next.js, React, GROQ) for DWO and the Global Education Campaign, letting non-technical staff publish and update content on their own.

SELECTED PROJECTS

Epistle — Codebase Context & MCP CLI

TypeScript · MCP · Tree-sitter

npmjs.com/package/epistle · MIT

Open-source CLI (250+ npm downloads) and MCP server that packs local codebases into token-budgeted context for Claude Code and Cursor. Uses tree-sitter for AST compression and secret redaction, with 70+ automated tests across Node 18/20/22 on Linux, macOS, and Windows.

Shunkan — Cross-Platform P2P Sync Engine

Rust · QUIC · UniFFI · Tauri

github.com/Ephraim-9/shunkan

Zero-cloud peer-to-peer sync engine over QUIC with mDNS discovery, BLAKE3 hashing, and PIN pairing, running within a 20MB idle memory budget and covered by 182 tests. Ships as a native Android integration (custom keyboard, quick-settings tile) and a Tauri desktop client.

Amanuensis — Typing Cadence Chrome Extension

TypeScript · Chrome API

github.com/Ephraim-9/amanuensis

Chrome extension that measures real-world typing speed and cadence to generate custom practice drills. Processes everything client-side, with zero keystroke logging and auto-disable on password fields.

EDUCATION

BS Computer Science — Virtual University of Pakistan

Expected 2028

HSSC — Fazaia Inter College (FBISE)

2024