

Muhammad Ramzan

Senior Software Engineer — Full-Stack & AI

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Summary

Senior Software Engineer with 4+ years shipping production systems end to end: Laravel backends, Vue/React/Next.js frontends, Flutter mobile apps, and Python AI services. 12+ apps live on the App Store and Play Store across healthcare, fintech, EdTech, and on-demand services.

Specialist in real-time and regulated products: WebRTC video/audio calling, WebSocket chat, webhook-driven integrations, HIPAA-compliant telehealth, and FHIR/EHR interoperability. Builds LLM-powered services with LangChain, LangGraph, and RAG, including a live AI monitoring bot that transcribes and inspects class sessions in real time. Leads projects from architecture through deployment.

Technical Skills

- **Backend Engineering:** Laravel (PHP), FastAPI (Python), Node.js, REST API design, RBAC, queues & task scheduling, MySQL, Redis
- **Frontend Engineering:** Vue.js (Inertia), React, Next.js 14 (App Router, TypeScript), Tailwind CSS, Filament admin panels
- **AI & LLM Systems:** LangChain, LangGraph (ReAct agents, tool calling), RAG pipelines (Pinecone, OpenAI embeddings), OpenAI API, Ollama, faster-whisper speech-to-text, PaddleOCR
- **Real-Time Communication:** WebRTC (self-hosted LiveKit, VideoSDK), WebSockets (Laravel Reverb, Pusher, Socket-based chat), video/audio calling, screen sharing
- **Payments, Messaging & Voice:** Stripe, Square, HBL Connect banking APIs, Meta WhatsApp Business API (templates, webhook events, automated notifications), Twilio (Voice, SMS), VAPI voice agents & AI call routing
- **Healthcare & Interoperability:** FHIR API integration, EHR integration (talKEHR), HIPAA-compliant telehealth, insurance and provider-availability workflows, AI medical scribe pipelines
- **Mobile:** Flutter & Dart (Bloc, Provider, GetX), Firebase, Google Maps, MVVM, Android native (Java/Kotlin), App Store & Play Store releases

- **Cloud & DevOps:** AWS (EC2, S3, Rekognition, Textract), Hostinger shared hosting & VPS, automated CI/CD deployments with GitHub Actions, Vercel, self-hosted MinIO, Git

Selected Projects

Online Quran Academy Portal (SaaS) — Architect & Lead Engineer · Laravel, Vue.js, FastAPI, LiveKit, Laravel Reverb, MySQL, MinIO · [Live app](#)

- Role-based B2B platform with Admin, Manager, and Teacher portals, RBAC, Google OAuth, and OTP login.
- Live one-to-one classes on self-hosted LiveKit (WebRTC); real-time updates over Laravel Reverb WebSockets; fully self-hosted storage on MinIO.
- AI monitoring bot in FastAPI: subscribes to session tracks, runs VAD-gated faster-whisper transcription and PaddleOCR on screen frames, and flags contact-number sharing (including Roman Urdu spoken digits).
- Scheduling engine that materializes recurring class series into sessions, so substitute teachers override single sessions without breaking the series.
- Automated WhatsApp alerts via Meta Business API templates and webhooks.

Capital Psychiatry Group — Telehealth App — Lead Developer · Flutter, Laravel, FHIR/EHR APIs · [App Store](#)

- HIPAA-compliant telehealth app built from scratch: video sessions, same-day booking, insurance selection, and secure medical records.
- Real-time provider availability and slot management through talkEHR EHR integration.

Azz Medical Associates — Booking App & Admin Panel — Lead Developer · Flutter, Laravel · [Play Store](#) · [App Store](#)

- Laravel backend and admin panel synced with talkEHR APIs; admins manage insurance priority, procedures, and provider specialties.

Quran Verse Pro — Live Tutoring Platform — Lead Developer · Flutter, WebRTC · [Website](#)

- Teacher discovery, availability-based booking, and one-to-one sessions with video, audio, and screen sharing.

eCitizen PH — Emergency Response App — Mobile Developer · Flutter, Node.js, WebSockets · [Play Store](#)

- Real-time incident uploads, app-to-app calling, and responder-ready reports for community emergencies.

KYC Verification System (Mawsook) — Backend Engineer · Laravel, AWS Rekognition, AWS Textract

- Face matching, business-licence verification, image originality checks (ELA/EXIF), and age verification with server-side DataTables.

Experience

Senior Flutter Developer — Tech Hype, Lahore · Jul 2024 – Present

Scope: real-time product engineering, app architecture, and API integration

- Own application architecture, state management (Bloc/Provider/GetX), and code quality across multiple client products.
- Built real-time chat with typing indicators, group admin controls, threaded replies, read receipts, and highlighted message search.
- Integrated REST APIs, Firebase services, push notifications, and WebSocket channels; collaborate with project managers on delivery.

Mobile App Developer — Prime Health Services, Lahore · May 2023 – Jul 2024

Full-stack scope: Flutter apps, Laravel backends and admin panels, EHR API integration

- Led development of healthcare appointment and telehealth apps, published on the App Store and Play Store.
- Built Laravel backends and admin panels integrated with talkEHR EHR APIs for real-time provider availability and slot booking.
- Delivered HIPAA-compliant telehealth features: video sessions, insurance selection, and secure medical-record access.

Flutter Developer — Hussain Tech Labz, Lahore · Apr 2022 – May 2023

Scope: Flutter apps plus backend payment APIs for a banking integration

- Built enterprise Flutter apps from UI/UX designs, including multi-vendor food delivery and on-demand service platforms.
- Developed payment APIs connecting Allied College of Health Sciences fee vouchers to HBL Connect, with payment records stored for admin reporting.
- Integrated REST APIs, Firebase, SQLite storage, and push notifications; handled maintenance and performance fixes.

Education

Bachelor of Information Technology — Bahauddin Zakariya University, Multan · 2018 – 2022 · CGPA 3.32