

Muhammad Umer

Mobile App Developer · AI-Integrated Cross-Platform Engineer

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Mobile App Developer with 5+ years of hands-on experience shipping production-grade cross-platform applications with Flutter, React Native, and native Android/iOS (Kotlin, Java, Swift). Specialized in integrating AI into mobile products — real-time translation, speech-to-text/TTS, LLM chatbots, RAG assistants — and strong in real-time systems (WebSockets, BLE, Firebase), performance optimization, and end-to-end App Store / Play Store delivery. In 2026, author of seven open-source projects forming a testing & safety layer for on-device AI (~500 tests, Swift + TypeScript sharing one capture format) — every claim below is verifiable in a public repository.

PROFESSIONAL EXPERIENCE

Software Engineer — Mobile · Infinitiv.AI, Lahore (hybrid) Aug 2025 – present

- Architect and ship end-to-end production apps in Flutter and React Native — Clean Architecture, SOLID, modern state management (Bloc, Provider, Riverpod).
- Build native modules in Kotlin, Java, and Swift bridging BLE, NFC, and background services into cross-platform apps.
- Engineer real-time features: live translation, speech-to-text/TTS, BLE device communication, WebSocket streaming.
- Optimize performance — parsing, caching, lazy loading, memory — cutting cold-start time on low-end devices; deploy supporting APIs on AWS EC2 with Docker and CI/CD.

Mobile App Developer · DriftMeta, Islamabad (remote, contract) May 2025 – Oct 2025

- Built and scaled two investor-acquired mobile-first products end to end — from prototype to deployment and investor handoff.
- AI learning app in Flutter: AI-generated courseware, real-time code evaluation, personalized paths (Flask, LangChain, OpenAI, WebRTC).
- Maternity-care chatbot providing reliable medical consultancy with a structured knowledge base and real-time Q&A (Flutter, Node.js, Firebase).

Mobile Application Developer → Full Stack Engineer · Vireon Solutions, Islamabad (remote) Nov 2020 – Apr 2025

- Joined as a junior developer in first year of university; grew over 4.5 years across mobile delivery, AI integration, and full-stack backend work.
- Developed AI-driven apps with Flutter and React Native — NLP chat, speech recognition, TTS, recommendation engines (TensorFlow, PyTorch, LangChain).
- Built mobile-facing APIs in Node.js and FastAPI with Redis caching; integrated RAG architectures (FAISS, ChromaDB) for in-app semantic search and contextual chat.
- Deployed backends on AWS EC2 and Heroku with Docker and CI/CD pipelines.

OPEN SOURCE — THE TESTING & SAFETY LAYER FOR ON-DEVICE AI (2026)

unswayed (Swift + npm) — statistical parity gate for swapping AI models: Wilson/Newcombe confidence intervals, honest "undecided" verdicts; both languages share one capture format. Real finding: Apple's on-device model failing parity with itself (compliance 100%→40%, CI [-0.88, -0.03]).

underfoot (umer9538.github.io/underfoot) — public drift observatory documenting what Apple/Google OS updates silently change in on-device models.

vouch (pub.dev) — freezes eval baselines and fails CI on silent model-swap regressions; 85 tests. · **llm_replay_eval** (pub.dev) — deterministic record/replay + evals for in-process on-device LLMs.

redact (pub.dev) — on-device PII redaction; 164 tests, zero dependencies. · **golden_lens** (pub.dev) — golden tests that tell AI coding agents which widget and source line broke.

SELECTED PROJECTS — 14 SHIPPED, 2020-2026

First Air Tag — NFC emergency medical profiles (React Native / Expo) 2025 – 2026

- NFC wristbands let first responders read encrypted medical profiles instantly — offline, even without the app installed.
- JWT auth with OTP resets, email verification, 2FA, biometric login, multi-tenant RBAC (Individual / Organization / Admin).

BuildBuddy — cross-platform construction management (Flutter: Android, iOS, Web)

2024 — 2025

- Real-time cross-role sync on Firebase Realtime DB; Cloud Functions + Stripe payments; Google Maps; multi-role auth.
- Automated milestone-budget engine with template allocation and instant deduction; in-app messaging, weather, SLA tracking.

Mershed — AI travel companion for Saudi Arabia (Flutter, Gemini 1.5 Flash)

2024

- Personalized itineraries by budget/season/preferences across 5 cities; "TravelGenie" chatbot with offline caching and human-support escalation.
- Google Maps + Routes API, Nominatim/Overpass, Hotels.com and Event APIs — transit, offline maps, live booking, event discovery.

Also shipped: AI Learning Platform **ACQUIRED** · Maternity Care Bot **ACQUIRED** · CloudKey (NFC hotel keys) · ServiceMate (booking SaaS) · SecurePay (E2E-encrypted payments) · HealthSync · GroceryMate · AI Chatbot · Insaf (legal tech) · CJE (school platform) · Mundial Manager.

TECHNICAL SKILLS

MOBILE	Flutter, React Native, Android (Kotlin, Java), iOS (Swift), Expo, BLE, NFC, WebSockets, Push Notifications, Deep Linking
LANGUAGES	Dart, JavaScript, TypeScript, Kotlin, Java, Swift, Python, C++, SQL
ARCHITECTURE	Provider, Bloc, Riverpod, Redux, Clean Architecture, SOLID, MVVM
AI / ML	OpenAI API, Gemini, LangChain, TensorFlow, PyTorch, RAG, FAISS, ChromaDB, Speech-to-Text, TTS
BACKEND / DATA	Node.js, Express, FastAPI, Flask, REST, GraphQL · Firebase (Firestore, RTDB, Auth, Functions), PostgreSQL, MongoDB, SQLite, Prisma
DEVOPS / TOOLS	AWS EC2, Docker, CI/CD, Git, Heroku, Stripe API, Google Maps SDK, Postman, Fastlane basics

EDUCATION & AWARDS

BS Computer Science — Major in Generative AI · FAST NUCES, Islamabad

2021 — 2025

- Dean's List: Fall 2021, Spring 2022, Fall 2024 (top 10% of cohort).
- Admin Head, FCAP — FAST Club of App Development & Programming; led 100+ members (2023–2025).
- Teaching Assistant — Programming Fundamentals, OOP, Data Structures, Algorithms, AI; 600+ students, 10+ faculty (2022–2025).

1st Place — Software Sprint, DAIRA (2024) · **3rd Place** — Cross-Platform Mobile App Hackathon, GIKI (2025)

Full evidence register with links for every claim: the portfolio · github.com/Umer9538 · Generated July 2026