

# SHAYAN GUL

Android & Cross-Platform Engineer | Kotlin • Jetpack Compose • Flutter

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## PROFESSIONAL SUMMARY

Android developer with 4+ years of production experience, currently building and maintaining applications serving 100,000+ active users at Binary Ops. Strong in Kotlin, Jetpack Compose and Clean Architecture, with working depth in Kotlin Multiplatform, Flutter and Node.js. Ship complete products independently as well — offline-first retail systems, an on-device PDF and Urdu OCR suite, and an open-source on-device RAG library — and publish applied deep-learning research. Comfortable owning a product from architecture through Play Store release and post-launch support.

## TECHNICAL SKILLS

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| <b>Languages</b>     | Kotlin, Java, Dart, Python, JavaScript / TypeScript, C#, SQL                                        |
| <b>Mobile</b>        | Jetpack Compose, Android SDK, Kotlin Multiplatform, Compose Multiplatform, Flutter, Material 3      |
| <b>Architecture</b>  | MVVM, Clean Architecture, Hilt, Koin, Coroutines & Flow, Room, SQLDelight, WorkManager              |
| <b>Backend / Web</b> | Node.js, Express, MySQL, Firebase, Firestore, Next.js, React, Supabase, .NET Core, SQL Server       |
| <b>AI / ML</b>       | ML Kit, MediaPipe, ONNX Runtime, Tesseract OCR, PyTorch, Swin Transformer, on-device RAG            |
| <b>Tools</b>         | Android Studio, Git, Gradle, CI pipelines, Figma, Google Play Console, AdMob, Meta Audience Network |

## PROFESSIONAL EXPERIENCE

### Android Developer — Binary Ops

Aug 2022 – Present

Rawalpindi, Pakistan

- Build Android applications from scratch and maintain them in production, supporting a portfolio of apps with **100,000+ active users**.
- Shipped and maintain **Islamic Prayer Time** (prayer times, Qibla direction, notifications, Duas), **Photo Editor** (filters, neon effects, background remover, 20+ tools), **Smart Switch** (peer-to-peer device data transfer), **Images to PDF Converter** (encryption, rotation, font control), **Face Flag App** and **Period Tracker**.
- Migrated legacy Java screens to Kotlin and Jetpack Compose, and introduced MVVM structure to improve maintainability across the app portfolio.
- Handle Play Store release management, ad monetization integration and post-launch issue resolution.

### Junior Android Developer — Impact Software Solution

Feb 2022 – Aug 2022

Peshawar, Pakistan

- **FoodyMoody** — restaurant food ordering app: built UI screens, implemented the order flow and resolved production bugs.
- **PocketMRT** — online grocery app: product listings, cart functionality and UI improvements.

### Independent Developer — Freelance & Own Products

2023 – Present

Islamabad, Pakistan

- Design, build and deliver complete products for clients and as own ventures — retail POS systems, e-commerce platforms and mobile apps — covering requirements, architecture, build, release and support.

## SELECTED PROJECTS

**PDF Toolkit** — Offline Android PDF Suite Kotlin 2.0, Jetpack Compose, Hilt, Room, WorkManager, PdfBox-Android, ML Kit, Tesseract 5

- Shipped to v1.15 with 14 tools: view, merge, split, compress, convert, organize, watermark, lock/unlock, text extraction, OCR, scan and searchable PDF output.
- Built Urdu OCR with layout-preserving text reconstruction, plus annotation, signing, glyph-level redaction, form fill and PDF-to-Word conversion. Localized into 21 locales with a CI pipeline running tests.

**Retail POS Systems** (General Store POS & DukanPOS) Kotlin, Jetpack Compose, Compose Multiplatform, Firestore

- Delivered an offline-first point-of-sale system with background sync, thermal receipt printing, barcode scanning and label printing, role-based access control and 15+ report types.
- Built DukanPOS on Compose Multiplatform with race-condition-safe stock handling, digital credit ledger, WhatsApp payment reminders and JSON backup/export.

**rag-core** — On-Device RAG Library for Android (open source) Kotlin, ONNX Runtime

- Fully offline retrieval-augmented generation library requiring no API keys; core contracts, text chunker, ONNX embedder and a pure-Kotlin WordPiece tokenizer delivered. Published as [io.github.rkshani.rag](https://github.com/rkshani/rag).

**Taj Fiberglass** — E-Commerce Platform Next.js 14, Sanity CMS, Supabase

- Built a live storefront for a manufacturer with JazzCash/Easypaisa/Safepay integration, volumetric shipping logic, a separate B2B wholesale portal and phone OTP authentication.

**RehabCoach** — Physiotherapy Adherence App Kotlin, Compose, Clean Architecture, Hilt, MediaPipe

- In development: camera-based pose estimation for exercise form checking, speech coaching, and dual patient/therapist roles, with the domain layer verified by compiled Kotlin unit tests.

**Islamic App Portfolio** — Multi-App Strategy & Monetization Flutter, native Android, Meta Audience Network

- Manage 20+ published app properties with a flagship/specialist/long-tail portfolio strategy; migrated Azan Clock from Flutter to native Android and built a Quran app with a custom neumorphic UI.

## RESEARCH & PUBLICATIONS

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**Real-Time Driver Drowsiness Detection for Edge Deployment** — manuscript prepared for MDPI *Sensors*

- Swin Transformer framework achieving 99.06% accuracy on the DDD dataset at ~18 ms/frame (~55 FPS); includes ablation studies, robustness evaluation under low light, blur and occlusion, and Grad-CAM analysis.

**Demographic Bias in CheXpert Chest X-Ray Training Labels** — collaborative research, in progress

- Led exploratory data analysis and visualisation of demographic label distribution, and built the ResNet-50 training pipeline for the classification experiments.

## EDUCATION

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**BSc Software Engineering**

Dec 2017 – Dec 2021

*Sarhad University of Science & Information Technology (SUIT), Peshawar, Pakistan*

## ADDITIONAL

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| <b>Teaching</b>  | Prepare university lab courseware for Air University, Islamabad — Programming Fundamentals (C++), Information & Communication Technology, and Software Requirements Engineering lab manuals |
| <b>Languages</b> | English, Urdu, Pashto                                                                                                                                                                       |