

# Muhammad Mohsin

## Android Engineer

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### SUMMARY

Android Developer with 4 years of experience building scalable, high-performance mobile applications using **Kotlin, Java, Jetpack Compose, Coroutines, Flow**, and modern Android architecture patterns. Skilled in **Compose MultiPlatform, Jetpack Compose, Clean Architecture, MVVM, modularization, dependency injection (Koin/Hilt/Dagger)**, and performance optimization using **NDK/C++, OpenCV** where required. Experienced in integrating REST APIs, Google Play Services, Maps, Room DB, and Firebase tools including Crashlytics and Analytics. Strong focus on clean code, UI/UX quality, testing (JUnit, Espresso), and delivering stable releases through CI/CD. Passionate about modern Android development, code quality, and building user-centric mobile experiences.

### TECHNICAL SKILLS

**Languages:** Kotlin (Primary), Java, C++, Python

**Android Development:** Jetpack Compose, XML UI, MVVM, Clean Architecture, Modularization, Material Design 3

**Android Jetpack:** LiveData, ViewModel, Navigation, DataStore, Room Database, WorkManager, Paging 3

**Asynchronous:** Coroutines, Flow, StateFlow, SharedFlow

**Networking & APIs:** Retrofit, OkHttp, RESTful APIs, JSON, WebSockets

**Dependency Injection:** Hilt, Dagger 2, Koin

**Performance & Native:** Android NDK, C++, JNI, Memory Optimization, OpenCV

**Testing:** JUnit, Espresso, Mockito, UI Testing, Instrumentation Tests

**Firebase:** Crashlytics, Analytics, FCM, Remote Config, Firebase Auth

**Google APIs:** Maps SDK, Location Services, Directions API, ML Kit

**Tools:** Android Studio, Git, GitHub, GitLab CI/CD, Gradle, Postman, Jira

**Other Skills:** Bluetooth, CameraX, Sensors, Background Services, App Optimization

### EXPERIENCE

#### Android Developer (High-Performance Engineering)

Feb 2022 – Oct 2025

*Satus Systems*

*Lahore, Pakistan*

Optimized performance-critical modules using **C++ (NDK)** and JNI, improving memory usage for 100K+ active users.

Reduced crash rates by 20% through thread-safe architecture using Kotlin Coroutines & Flow.

Introduced automated QA tools, improving overall code quality by 20%.

Integrated Stripe/PayPal with robust error-handling, increasing payment success rates by 35%.

#### Android Developer Intern

Apr 2021 – Jan 2022

*Softlinks*

*Lahore, Pakistan*

Converted Figma designs into reusable XML components, improving UI development speed by 10%.

Implemented RESTful API communication using Retrofit.

Collaborated in Agile teams for timely feature delivery.

#### IT System Administrator

Mar 2017 – Mar 2021

*Punjab Government*

*Lahore, Pakistan*

Ensured 99% uptime while managing IT infrastructure for 50+ users.

Reduced annual IT operational cost by 15% via systematic resource planning.

## SELECTED ENGINEERING PROJECTS

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**AI-Powered Biometric Verification System (Liveness Detection)**

*Computer Vision, Edge AI*

- Integrated **OpenCV** and **FaceNet** with **TensorFlow Lite** for real-time on-device recognition.
- Implemented geofencing algorithms for location-based security validation.

**Play Store Link**

**High-Performance PDF Scanner (50M+ Downloads)**

*C++, OpenCV, Android NDK*

- Developed real-time edge detection and image enhancement pipeline using **C++ & OpenCV**.
- Optimized memory allocation to prevent OOM crashes on low-end hardware.

**Play Store Link**

**Rydelinx – Driver-Centric Ride-Sharing App**

*Kotlin, MVVM, Maps API*

- Developed a driver-first mobility platform using Clean Architecture + Coroutines.
- Integrated Google Maps SDK + Directions API for optimized route computation.

**Play Store Link**

**Automotive Service & Maintenance Platform ("Garage App")**

*MVVM, Android Architecture*

- Built a dual-module system enabling workshops and vehicle owners to manage maintenance workflows.
- Designed scalable MVVM architecture with role-based access control.

## EDUCATION

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<b>M.Sc. Automotive Software Engineering</b> <i>Technische Universität Chemnitz</i>	2026 – 2028 (Expected) Germany
<b>M.Sc. Information Technology</b> <i>University of Education</i>	2014 – 2016 Pakistan

## CERTIFICATIONS

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- Google Agile Essentials – Coursera (2025)
- Google Cybersecurity – Coursera (2025)

## LANGUAGES

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- English: C1
- German: A2 (Progressing)