

MANISH PATIYAL

Senior Android Engineer | Mobile Solution Architect | Cross-Platform & Full-Stack Mobile

Mohali, Punjab, India

(+91) 82630-81437 | manishpatiyal27@gmail.com

PROFESSIONAL SUMMARY

Senior Android Engineer and Technical Lead with 12+ years of software engineering experience, specializing in Android platform development, Android framework understanding, system-level integration, and end-to-end mobile solution architecture. Hands-on experience with AOSP, Android Framework, AIDL, Binder IPC, native Android integration, and complex hardware/software integrations.

Strong Java and Kotlin expertise combined with experience across native Android, React Native, and Flutter. Capable of owning a mobile product end-to-end --- from technical discovery and architecture through application/platform development, backend/API integration, CI/CD, performance optimization, release, and production support.

Working knowledge of Python, Node.js, React.js, REST APIs, GraphQL, AWS, CI/CD, and cloud-integrated mobile architectures enables ownership beyond the mobile client and supports complete mobile solution delivery.

PROFESSIONAL EXPERIENCE

VT Netzwelt Pvt. Ltd., Chandigarh

Senior Principal Technical Lead | Jan 2022 -- Present

- Lead technical architecture and development of enterprise-scale mobile solutions, driving projects from technical discovery and architecture through implementation, integration, performance optimization, and production delivery.
- Architect Android solutions using Kotlin and Java with strong emphasis on maintainability, scalability, performance, and system-level design.
- Apply deep understanding of Android internals, framework behavior, concurrency, memory management, and platform performance to solve complex engineering problems.
- Lead technical strategy, architecture decisions, code reviews, engineering standards, effort estimation, and cross-functional technical collaboration.
- Drive performance engineering using Perfetto, Systrace, memory profiling, and Android diagnostic tooling; investigate ANRs, performance bottlenecks, and resource issues.
- Design resilient data synchronization and offline-first architectures using Kotlin Coroutines and Flow.
- Lead integration of complex third-party SDKs and native platform capabilities across Android and cross-platform mobile applications.
- Mentor senior engineers and establish architecture, coding, testing, and delivery standards across mobile teams.

VT Netzwelt Pvt. Ltd., Chandigarh

Senior Software Engineer | May 2017 -- Jan 2022

- Architected and developed large-scale Android applications using Java/Kotlin, Android architecture patterns, modular design, and reusable components.
- Built the GfK Consumer Scan application from the ground up, scaling to 5M+ downloads.
- Implemented complex mobile workflows involving barcode scanning, image processing, background processing, offline synchronization, REST API integration, and device capabilities.
- Designed efficient data synchronization and offline-first mechanisms for reliable operation across varying network conditions.
- Investigated application performance, memory usage, crashes, ANRs, and lifecycle-related issues.

- Conducted architecture discussions, code reviews, technical mentoring, and internal knowledge-sharing sessions focused on Android internals and engineering practices.

IDEMIA, Noida

Software Engineer | Aug 2013 -- May 2017

- Developed Android solutions involving secure APIs, proprietary SDKs, hardware/software integration, and system-level Android components.
- Worked with Android platform technologies including AOSP and AIDL for system-level communication and integration.
- Developed reusable Android components and abstraction layers for biometric enrollment, authentication, and identity verification systems.
- Worked on secure Android integrations and enterprise device workflows requiring interaction between application and native/platform layers.
- Architected and implemented a Remote SIM Personalization platform for enterprise Android tablets, integrating hardware and software components with real-time state management and secure provisioning workflows.
- Delivered proof-of-concepts, technical demonstrations, production deployments, and technical consulting for enterprise customers.

PROJECTS

GfK Consumer Scan --- Large-Scale Android Platform/Application Solution

- Architected and developed a production Android application from conception to production with 5M+ downloads.
- Designed modular architecture, offline-first data flows, synchronization, background processing, and resilient network communication.
- Implemented performance and reliability improvements using Android profiling and diagnostic tooling.
- Mentored an 8+ member engineering team on architecture, code quality, testing, and technical implementation.

Keyhook --- React Native + Native Android Integration

- Designed a React Native architecture integrating the Insta360 Camera SDK through custom native Android modules.
- Built native bridges exposing platform and camera capabilities to the JavaScript layer.
- Worked on real-time image processing and media streaming with emphasis on threading, memory management, lifecycle handling, and performance.

Remote SIM Personalization Platform --- Android Enterprise / Hardware Integration

- Designed and developed an Android-based enterprise platform integrating hardware, secure provisioning workflows, and real-time state management.
- Worked on system-level Android integrations and secure communication between software components.

TECHNICAL SKILLS

Android Platform: AOSP, Android Framework, System Services, Binder IPC, AIDL, Android Internals, Android Platform Integration, Android Security

Native Android: Kotlin, Java, JNI, Android NDK, C/C++, IPC, Native Libraries, Hardware/Software Integration

Cross-Platform: React Native, Flutter, JavaScript, TypeScript, Native Modules, Platform Bridges

Backend & APIs: Python, Node.js, React.js, FastAPI, REST, GraphQL

Cloud & DevOps: AWS, Bitrise, Jenkins, GitHub Actions, Docker, Git, GitLab, Gerrit, CI/CD

Performance & Debugging: ADB, logcat, dumphsys, Perfetto, Systrace, Android Profiler, ANR Debugging, Memory & CPU Profiling

Architecture & Leadership: System Design, Mobile Architecture, Design Patterns, SOLID, Modular Architecture, Technical Design, Code Reviews, Agile/Scrum, Technical Leadership

EDUCATION

B.Tech, Computer Science & Engineering

Lovely Professional University, Jalandhar | 2010 -- 2013

Diploma, Computer Science

Government Polytechnic, Sundernagar | 2007 -- 2010

ADDITIONAL

Languages: English, Hindi