KANAV WADHAWAN
Principal Android Platform Architect

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🌐 KanavWadhawan.com | *Visa Status: Dependant Visa (No Sponsorship Required)*

EXECUTIVE PROFILE

Principal Android Architect defining the technical roadmap for high-scale mobile ecosystems (**500M+ users**). Deep authority on Android Runtime (ART) optimization, Binder IPC internals, and Developer Productivity Engineering. Orchestrates architectural governance, ABI stability standards, and "Contract-First" strategies across globally distributed engineering organizations (40+ engineers). Specializes in brownfield modernization and defining engineering competency at scale.

ANDROID PLATFORM STRATEGY & DIRECTION

Architecture Committee Chair: Chartered the **RFC/ADR** governance body, serving as the final arbiter for architectural decisions across **40+ engineers**. Achieved **100% adoption** of modularization standards across 6 squads.

Cross-Organizational API Strategy: Authored the company-wide "Contract-First" mandate, enforcing Protobuf schema-driven development. This eliminated client-side parsing regressions and reduced integration lead time by **30%**.

Staff+ Competency Definition: Define the engineering hiring bar and promotion criteria for Senior/Staff roles. Institutionalized automated code health metrics (Cognitive Complexity, Coverage), blocking merges that failed the **Top 1% quality bar**.

SELECTED IMPACT HIGHLIGHTS

Platform Stability (Paytm): Chartered the reliability roadmap for a Super-App serving **500M+ users**, achieving **99.99% crash-free sessions** by systemically eliminating critical ANRs and memory leaks.

Developer Productivity (DPE): Transformed build infrastructure using **Gradle Composite Builds** and remote caching. Reduced incremental build times by **40%**, saving **1,000+ developer hours** annually.

SDK Distribution Strategy: Established Weavr's Android SDK architecture with strict **ABI compatibility** and consumer-proguard rules, enabling seamless integration for top-tier enterprise banking partners.

High-Frequency Concurrency: Defined the real-time WebSocket protocol for Angel One using **Kotlin Coroutines & Channels**, handling millions of ticks/sec to support High-Frequency Trading (HFT).

ANDROID PLATFORM AUTHORITY

Strategic mastery of Android internals applied to resolve scale, security, and performance constraints.

Runtime & Internals: Optimization of Binder IPC for high-throughput flows, ART Garbage Collection tuning, Object Pooling in hot paths, and systemic mitigation of `TransactionTooLargeException`.

Build Engineering & Security: Bytecode manipulation via R8/D8, custom Lint rules for architectural enforcement, and Gradle Composite Builds.

Modern Architecture: Governance of MVVM/MVI, Clean Architecture, multi-module design, and Jetpack Compose adoption (Recomposition Optimization).

Performance & Concurrency: Main Thread hygiene via Perfetto/Systrace, structured concurrency (Coroutines/Flows), and offline-first resilience (Room/WorkManager).

PROFESSIONAL EXPERIENCE

WEAVR.IO   United Kingdom
Senior Mobile Engineer   *2024 – Present*

- *Role Scope: Principal Architect & SDK Platform Owner (Individual Contributor)*
- **Strategic Platform Vision:** Defined the 3-year architectural roadmap for the Embedded Finance SDK. Governed strict module boundaries (Core, API, UI, Analytics) to ensure binary compatibility for 3rd-party integrators.
- **Jetpack Compose Transformation:** Directed the organization-wide migration to Compose. Authored **ADRs** to standardise theming, state hoisting, and UI component interoperability across the ecosystem.

- **Performance Engineering:** Orchestrated performance initiatives using **Systrace and LeakCanary**, reducing SDK initialization time by **600ms** through strict main-thread hygiene.
- **Quality Governance:** Mandated static analysis standards (**Ktlint, Detekt, Android Lint**) via CI pipelines. Enforced a comprehensive testing pyramid covering JUnit/MockK, Espresso, and Contract Tests.

PAYTM   United Kingdom
Mobile Engineering Manager   *2021 – 2024*
- *Role Scope: Technical Stewardship & Principal Architecture for Mobile Org*
- **Reliability Roadmap:** Chartered the "Project Stability" initiative for a user base of **500M+**. Institutionalized observability standards via **Crashlytics**, achieving **99.99% reliability** for critical transactional flows.
- **Architecture Modernization:** Authored the strategy for transitioning from monolith to **Kotlin-first multi-module architecture**. Decoupled feature modules to unlock parallel deployment for **10+ squads**.
- **Security Strategy:** Established protocols for **OAuth2/OIDC flows**, secure token storage, and device integrity checks, ensuring regulatory compliance for high-trust financial journeys.
- **Cross-Domain Alignment:** Co-authored mobile-edge API contracts with Backend Principals, optimizing payload efficiency.

ANGEL ONE   India
Senior Mobile Engineering Manager   *2020 – 2021*
- *Role Scope: Technical Lead & Architect for Real-Time Trading Platform*
- **Real-Time Connectivity Protocol:** Defined the WebSocket layer for streaming stock ticks. Established the concurrency model to support massive scale (**50M+ downloads**) without UI frame drops.
- **Engineering Rigor:** Institutionalized engineering standards across squads, enforcing **PR templates, branching strategies, and CI quality gates** to maintain code health.
- **Protocol Strategy:** Defined the data-interchange strategy, evaluating **Protobuf vs. JSON** trade-offs to optimize end-to-end latency.

INDMONEY   India
Lead Android Developer   *2019 – 2020*
- **Brownfield Modernization:** Directed the architectural overhaul of the app (**30M+ downloads**), migrating legacy code to a modular **MVVM and Clean Architecture** structure.
- **Modern Stack Implementation:** Defined patterns for domain/use-case layers using **Retrofit, Room, and in-memory caching**. Institutionalized adoption of **Jetpack components (ViewModel, Flow, WorkManager)**.
- **Startup Optimization:** Optimized app startup time and memory footprint via lazy loading strategies.

INFOSYS   India
Senior Android Developer   *2013 – 2018*
- **Enterprise Delivery:** Recognised in **Top 5% (Job Band A)**. Structured modular architectures for enterprise apps.
- **DevOps & Security:** Established **CI pipelines with Jenkins/Gradle**. Enforced enterprise-grade security including **TLS Pinning** and Keystore encryption.

EDUCATION

IP University   New Delhi, India
Bachelor of Technology in Information Technology   *2009 – 2013*