

ARUN SHANKAR

GOOGLE CERTIFIED SENIOR ANDROID ENGINEER

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With 12+ years of experience, I specialize in building robust, scalable, and secure mobile platforms across **Banking, Retail, and Automotive** domains. With expertise in Kotlin-first development, **Jetpack Compose, Clean Architecture**, TDD & BDD, and modern platform engineering, I've led mission-critical features like **Payments and Card Management** for NatWest's multi-brand app, serving over **10 million** active users.



SUMMARY

- Improved **build speed** by ~40% using **pre-compiled Gradle plugins**, optimization and modularization.
- Elevated **accessibility** compliance for **WGCA 2.1**, enhancing brand perception and user trust.
- Led compose-first architectural revamp to modernize legacy codebases into modular, scalable systems.
- Drove **high-value, high-impact** feature delivery through **strategic platform-wide** decision-making.
- Excel in leading teams with values like clean design, strong ownership, and fast, reliable delivery.

EDUCATION

B.TECH

Electrical & Electronics
CUSAT - 2009 - 68.16%

LINKS:



User Name

@ARUNKARSHAN



USER ID

2319627

android



User Name

@ARUNKARSHAN

DOMAINS

BANKING / FINTECH
RETAIL / E-COMMERCE
ENTERTAINMENT
AUTOMOTIVE
INFOTAINMENT

SKILLS

- Programming Languages:** Kotlin, Java, PHP, Python, Groovy, SQL
- Architectures:** Clean Architecture, MVVM, MVI, Coordinator pattern, Modular Monolith
- Frameworks & Libraries:** Jetpack Compose, Android Jetpack, Retrofit, Coroutines, Flow, StateFlow, RxJava, Dagger Hilt, Koin, Room, Navigation Component, Compose Multiplatform, JSON, GSON, Lottie
- DevOps & CI/CD:** Gradle Enterprise, Custom Gradle Plugins, Precompiled Scripts, Build Optimization, GitHub Actions, Gitlab, Jenkins
- Testing:** JUnit, MockK, Robolectric, Espresso, Test-Driven Development (TDD), Automated UI Testing
- Security & Compliance:** ADoS MFA Integration (Biometric Authentication), SSL Pinning, Encryption, App Hardening, WCAG 2.1 Accessibility Compliance
- Performance & Resilience:** Crashlytics Monitoring, Crash Rate Optimization (less than 1%), Kill Switch Strategies, App Performance Tuning
- Agile & Leadership:** Agile Champion, Feature Ownership, Cross-Team Collaboration, Mentorship, Code Reviews, RFC Discussions
- Tools:** Android Studio, Firebase, Figma, Jira, Confluence, Postman

LATEST PROJECT

NATWEST GROUP

SENIOR ANDROID DEVELOPER

Nov 2023 - Present



As a key contributor to the NatWest Mobile App, architected and delivered customer-critical journeys in a multi-brand banking app serving 10M+ users, reducing build time by 40%, crash rates to less than 1%, and modernizing platform architecture for the next decade.

- Contractor - through **Tata Consultancy Service** from Nov 2021 - July 2023
- Staff Software Engineer from Nov 2023 - continuing
- **End-to-end ownership** of feature delivery of critical, high-value features including **International Payments (SEPA-compliant)**, **Domestic Transfers**, and **Debit and Credit Card Management, Virtual Cards**, from initial architecture design to production rollout, collaborating closely with Product, Design, Backend, Security, and Testing teams to ensure business success and customer adoption. Delivered complex, time-critical features on time with a **bug-to-story ratio under 5%**.
- **Reduced build time by ~40%** by implementing **Gradle Enterprise caching, precompiled plugins, modularization strategies**, and **multi-instance app configurations**—significantly improving developer productivity and release velocity.
- **Reduced crash rate to sub-1%** by partnering with senior leadership and utilizing Firebase Crashlytics, ensuring stable and reliable major releases.
- **Architectural leadership** in transitioning the app from a legacy monolithic codebase to a highly modular, scalable **Clean Architecture**—supporting six distinct brands with a **flavor-agnostic, brand-agnostic approach** to maximize code reuse and reduce maintenance overhead. Implemented more unit tests around untested modules, leading to a **4% improvement** in test coverage and overall system reliability.
- **Led the modularisation**, enabling faster delivery, safer releases, and long-term scalability; also drove the **Jetpack Compose migration** by leading the transformation of legacy XML/MVP screens into a modern **MVVM/MVI Compose-first** architecture, used coordinator-style architecture for navigation flow orchestration, building scalable, reusable UI libraries to accelerate feature development.
- **Regularly mentored** junior and mid-level Android engineers, conducted in-depth code reviews, guided architecture adoption, and contributed to establishing engineering best practices across multiple pods.
- **Led accessibility compliance** by aligning the app with **WCAG 2.1 standards, enhanced app security** with **facial and voice biometrics** through ADoS MFA, ensuring seamless multi-factor authentication (MFA) without compromising user experience.

Tech Stack: Java, Kotlin, Coroutines, Flow, Coordinators, DeepLink, AppLinks, Firebase TestLabStateFlow, RxJava, Retrofit, Dagger-Hilt, Jetpack Compose, Compose Multiplatform, XML, Robolectric, Firebase Crashlytics, Gradle Enterprise, Compose Typesafe Navigation, ADoS MFA Integration etc.

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LOV Award - Twice awarded



Received for exceptional delivery of time-critical, business-critical features that enhanced brand and business value. Personally commended by Group CEO Dame Alison Rose for the first achievement.

WORK SUMMARY

TATA CONSULTANCY SERVICES

ASSISTANT CONSULTANT

Jul 2019 - Jul 2023

*Served as a senior mobile consultant for enterprise clients including **NatWest Group**, **Macy's (USA)**, and **Boots UK**, delivering scalable Android solutions across banking, retail, and healthcare domains. Led cross-functional engineering efforts, platform modernization, and release operations in globally distributed Agile environments.*

- **At Macy's:** Re-architected the Android app from a monolithic MVP codebase to a modular **MVVM Clean Architecture**, improving scalability and maintainability.
- Delivered core features including **Product Catalog**, **Checkout**, **Account & Order Management** using Java and Kotlin. Enhanced shopping experience with **In-Store Navigation** and **Product Detail Page (PDP)** features, increasing product discoverability and conversion rates.
- Integrated **Pointn SDK** for accurate in-store navigation and replaced third-party barcode scanning with **Firestore ML Kit**, reducing operational costs and improving performance.
- Led unit testing and code reviews, ensuring maintainability and delivery of high-quality, scalable code.
- **At Boots UK:** Acted as the **offshore Mobile Lead**, managing a team of 12 developers supporting the *Mobile Service Framework*.
- Owned and streamlined app publishing to the Google Play Store, managed multiple release channels, and ensured compliance with Play Store policies. Also oversaw release management and improved publishing efficiency across distributed teams.
- Suggested and implemented automation of daily operational tasks and system health checks, saving approximately **800 person-hours per year**.



Tech Stack: Java, Kotlin, MVVM, Clean Architecture, RxJava, Retrofit, Dagger-Hilt, Google Play Console, XML, Espresso, JUnit, Multi-track Release Strategy, Firebase Crashlytics, Gradle Enterprise, Compose Typesafe Navigation, Maps, Google Cloud.

EXPERIENCE

- Senior Software Engineer
NatWest Group
Nov 2023 - Present
- Assistant Consultant
Tata Consultancy Services
Jul 2019 - Jul 2023
- Technical Lead
CCS Technologies
Oct 2018 - Jun 2019
- Mobility Architect
Velox Innovations
Dec 2014 - Oct 2018
- Senior Software Engineer
Tata Elxsi
Aug 2011 - Sep 2014

PROJECTS

- Natwest Mobile App
- Macy's Retail
- Resource Viewer Plugin
- Boots UK
- Malayalam Almanac Calendar
- Kaefer Dom
- Insights IAS
- Janam TV
- Gogo Reel
- Bofin Android App
- Radio Mango FM

portfolio

<https://arun-shankar.web.app/career/projects>



Google Play Store
Listing Certificate
2023



Google Associate
Android Certification
2020



Azure Cloud AZ-900
Certification
2020



Scrum
Fundamentals
Certified
2020

