

Sanjay Kumar

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Profile Summary

Software Engineer II (Android) with 5+ years of experience building scalable production apps using Kotlin, Coroutines, Flow, and Jetpack. Delivered end-to-end features for telematics and mobility apps serving **400K+ users**, improving crash rate, cold-start time, and background reliability.

Skills

Languages: Kotlin, Java, C++

Android & Jetpack: Coroutines, Flow, ViewModel, LiveData, Room, WorkManager, Navigation, DataBinding, HILT, Sensors API, Google Play Services, Jetpack Compose

Architecture: MVVM, MVI, MVC, Clean Architecture, Repository Pattern, Modularization, Dependency Injection

Networking: Retrofit, OkHttp, Caching, Retry logic, Exponential backoff, Defensive Networking

Performance & Reliability: Crashlytics crash triage, ANR reduction, Cold-start optimization, async pipelines

Tools: Android Studio, GitHub Actions, Firebase Analytics, Gradle, ProGuard/R8, Cursor, Copilot

Testing: JUnit, Mockito, Espresso

Release: Play Store management, CI/CD automation, A/B rollout, Feature flags

Automotive (AAOS): Android Automotive OS (AAOS), Automotive HMI (UI/UX for in-vehicle systems), Car App Library, Vehicle HAL (VHAL) basics, Media & Navigation apps, System services, Emulator testing

Work Experience

Senior Engineer – Automotive, IELEKTRON Technologies Engineering Pvt Ltd - Feb 2026 – Present
Bangalore

Client: Renault Nissan Technology and Business Center India Pvt Ltd

- Contributing to feature development and maintenance on the **Android Automotive OS (AAOS)** platform for in-vehicle infotainment systems.
- Supporting development of **Automotive HMI (UI/UX)** screens aligned with in-car design and safety guidelines.
- Working with **Car App Library** components for Media and Navigation use cases.
- Gaining exposure to **Vehicle HAL (VHAL)** concepts and vehicle-property interactions within the AAOS framework.
- Performing feature validation and debugging using **AAOS Emulator**, adb, logcat, and system tools.
- Collaborating with cross-functional teams to support ongoing platform enhancements.

Software Engineer II – Android, Cambridge Mobile Telematics – Chennai, India August 2021 – October 2025

- Led end-to-end development of production Android apps used by **400K+ drivers**, including architecture, feature development, performance optimization, Analytics, QA support, and Play Store release.
- Built a **fault-tolerant background location pipeline** using **Kotlin, Coroutines, WorkManager**, and **Room** that checks country every 5 seconds and **automatically pauses telemetry uploads** when exiting mainland China.
- Integrated **Gaode Maps** and optimized GPS sampling, fallbacks, and device-specific configs for Huawei EMUI & Harmony OS, reducing GPS drift by **22%**.
- Reduced **crash rate from 1.8% → 0.6%** via structured recovery flows, defensive networking, offline caching, retry logic, and **Crashlytics**-driven fixes.
- Improved cold-start time by **18%** using lazy initialization, async DB loading, and eliminating main-thread workload.
- Automated CI/CD using **Bitrise, Gradle, ProGuard**, reducing release cycles and QA turnaround by **40%**.
- Migrated legacy codebases to **Modularized Clean Architecture**, improving code reuse and maintainability.
- Collaborated with **product, UX, data**, and **QA** teams to refine requirements and validate analytics before rollout.
- Performed code reviews, mentored juniors in **Kotlin, Jetpack Compose** best practices, debugging, concurrency,

and performance profiling with **Android Profiler & LeakCanary**.

Software Engineer Intern, Cambridge Mobile Telematics – Chennai, India

February 2021 – July 2021

- Improved Android build performance and modularization.
- Assisted in migrating the codebase from Java to Kotlin.
- Added analytics and A/B testing support.

Software Engineer Intern, Crimson Insights – Remote

November 2019 – April 2020

- Worked on Python development, leveraging frameworks like Django for back-end development and MongoDB for database management.
- Built a web application that converts any website into a web app and generates JAVA APK.
- Collaborated to build and deploy web-based solutions on the server, ensuring seamless conversion of websites to mobile-ready web apps.

Projects

Visual Drive

Google Play Store

- Developed core telematics features including **Safe Driving Score, EcoScore, Family Sharing, Leaderboards**.
- Improved sensor-driven trip detection via **Coroutines + WorkManager**, classification accuracy by **28%**.
- Reduced ANRs by batching DB writes, removing main-thread blockers, and optimizing WorkManager scheduling.

DriveWell Advance

Google Play Store

- Built **Hard Brake Alerts**, Trip Summary, Scoring modules, and Leaderboards using MVVM + Clean Architecture.
- Reduced **APK size by 14%** via resource shrinking, caching, and R8 optimizations.
- Developed reusable scoring/analytics components used across multiple CMT apps.

In-Car Media Player HMI

Android Automotive OS

- Contributed to development of an in-vehicle **Media Player HMI** using **Car App Library** on AAOS.
- Implemented standard playback controls and UI components aligned with automotive design guidelines.
- Worked on distraction-optimized, glanceable UI patterns suitable for in-car environments.

Education

Indian Institute of Information Technology, Sricity, B.Tech in Computer Science

August 2017 – May 2021

- **Coursework:** Computer Programming, Data Structures and Algorithms, DBMS, Operating Systems, Computer Networks, Computer Organization, OOPS

Awards and Certificates

- **Build Kotlin Multiplatform Mobile Apps for iOS and Android** (Udemy)
- **Advanced Proficiency in Python** (CutShort)

[Certificate Link](#)

[Certificate Link](#)