

MIKAEL PERRIN

Staff Software Developer

 mikaelperrin.dev  mikaelperrin  Montréal, QC

Experience

Freelance Android Developer

Self-Employed

 July 2025 - Present  Toronto, ON

- Building a mobile application for cheese enthusiasts with **Kotlin Multiplatform (KMP)** and **Compose Multiplatform (CMP)** targeting desktop, Android and iOS.
- Leveraging Github Actions to run unit tests and Paparazzi tests. Leveraging libraries such as navigation3, paging3, ktor client, coil and haze.
- Self-hosting backend server providing Rest APIs for the app. Implemented with Spring Boot/Kotlin. Built and published with docker.

Staff Software Developer - Infotainment Apps

General Motors of Canada

 Jan 2021 - June 2025  Toronto, ON

- **Led Android Applications development** for Cadillac, Chevy, Buick, GMC and BrightDrop brands across **40+ apps**, delivering a **single Android build image** for all vehicle models while meeting infotainment startup KPIs and resource constraints. **Brought consistency** through unified architecture, SDKs, libraries, and UI theming.
- **Spun up and led Applications Dev Forum** (100+ devs average attendance) to share knowledge and streamline solutions across global teams. **Removed roadblocks** through Android libraries development, theming strategies, and code reviews for proprietary apps and AOSP modifications.
- **Mentored technical leaders and developers** in RROs (Runtime Resource Overlays), GMCORE SDK releases, and GM CarUiLib plugin explorations.
- **[Remote with US team]** Implemented Telltales with **Qt/QML Framework and C++** for Cluster displays. **Set up CI/CD automation** with Github Actions and qt-cmake. Successfully collaborated with 15-person US team from Canada.
- **[Remote with US team]** Migrated Virtual Controls (VC) & Smart Controls from **RTOS to Android** following industry standards and Test Coverage metrics.
- Led **explorations and prototyping** for future programs (Google SDV, Ultifi SDK, Jetpack Compose, Standalone App Updates, testing improvements).

Summary

Staff Software Developer with **10+ years of experience designing and building large-scale mobile and automotive applications**, leading multiple teams globally, and releasing well tested products with quality.

Skills & Tools

French (Native) English (Bilingual)

Spanish (Conversational)

Languages and Frameworks

Android Kotlin Jetpack Compose Java

C++/Qt/QML SQL Bash Dagger/Hilt

Metro

Libraries and Tools

RxJava Kotlin Flow Espresso

Paparazzi Git Gradle (groovy & kotlin)

Jenkins Github Actions RROs

Operating Systems

AOSP AAOS

Paradigms, Architecture & Concepts

Clean Architecture SOLID principles

SOA API Design SDK Development

OOP Functional Programming

Reactive Programming

Agile: Scrum & SAFe

Performance Analysis

Senior Software Developer - Android Automotive

General Motors of Canada

📅 Apr 2019 - Jan 2021 📍 Toronto, ON

- Led **design and architecture** decisions to support automotive challenges in Android within infotainment's core applications, applying disciplined software development principles.
- Brought consistency across 15+ applications with **Clean Architecture** and **Domain-Driven Design, Kotlin, Dependency Injection, Reactive Programming** while leveraging agile methodologies (Scrum, SAFe)
- Developed, designed and led GMCore **internal SDK** used by 10+ applications, improving cohesion and reusability while allowing for configuration and flexibility.
- Integration of **3D models** within Android applications with **Unreal Engine** and **Filament**.
- Cross-component collaboration to share knowledge and inspire teammates, reducing the average number of defects per cadence by 50% and thus improving product reliability.
- Designed, developed, and tested customer focused features interacting with **CAN** through VHAL and **CarPropertyManager** APIs.

Senior Software Consultant - Android Automotive

Amaris - General Motors of Canada

📅 Apr 2017 - March 2019 📍 Toronto, ON

- Analysis, design, development and maintenance of the core **AOSP Dialer** application.
- Architecture, development, test and release of business logic APIs.
- Deployment process and integration documentation of said APIs for multiple core applications.
- **Technical leadership** in a team of 3 to 6 people.
- Integration of tools and documentation to improve team performance.

Software Consultant - Android Mobile Apps

Amaris - Citiway France / Citiway Canada Inc

📅 Jan 2016 - March 2017 📍 Aix-En-Provence, France

- Multiple Android applications development and testing for carpooling and multimodal transportation use cases ([Triplinx](#), [Moovizy](#), FleetMe/Wopé: [Passenger](#) - [Driver](#))
- Architecture and skeleton code generation on presentation and backend layers.
- Design and implementation of an Android library wrapping multiple **Android Maps APIs**.

Education

M.Sc. in Computer Science

University of Oklahoma

📅 2013 - 2015 📍 United States

with Master's Thesis.

Diplôme d'Ingénieur en Informatique (M.Sc. in Computer Science)

ISIMA (Clermont-Auvergne INP)

📅 2011 - 2014 📍 France

Internship: 5 months in a mobile development start-up for real-estate use cases. Android & iOS.

Associate Degree in Computer Science, option Computer Systems (DUT)

IUT Informatique de Clermont-Ferrand

📅 2009-2011 📍 France

Internship: 3 months in a physiotherapy lab, Florianopolis, Brazil. Embedded, Qt/C++.

Publication

Perrin, Mikael, et al. "Time-, energy-, and monetary cost-aware cache design for a mobile-cloud database system." *Biomedical Data Management and Graph Online Querying: VLDB 2015 Workshops, Big-O (Q) and DMAH, Waikoloa, HI, USA, August 31–September 4, 2015, Revised Selected Papers 1*. Springer International Publishing, 2016.

<https://tinyurl.com/mperrindmah2015>

Master's thesis: Cache design within a Mobile-Cloud database system.

Determine a query plan to decide whether to run a query on the mobile device or on the cloud, in order to reduce the processing time, the energy consumption and the monetary cost.