

Erfan Gholami

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Android Engineer with 7+ years shipping production **map and location-based apps** using **MapLibre SDK**, OpenStreetMap, and Google Maps. **Open-source SDK author** with a client library published to **Maven Central** and a multi-process **AIDL/Binder** architecture. Strong in **Kotlin** and **Java** with C/C++ background. Passion for API design, developer experience, and performance. NLnet-funded OSS contributor. M.S. Politecnico di Torino, 2025.

EXPERIENCE

Senior Android Engineer

Freelance

Apr. 2023 – Present

Remote – Turin, Italy

- Sole engineer on **Fotoshi**, a production geospatial photo-tagging app: integrated **MapLibre SDK** and **Google Maps** for interactive map rendering, offline-first sync, crowdsourced map-object contribution, and gamification. Profiled and reduced battery drain by tuning location-monitoring intervals and adding camera sleep mode. (Kotlin, Jetpack Compose, Clean Architecture, Hilt, Coroutines/Flow, Room, DataStore, WorkManager, CameraX, AWS Cognito.)
- Building **Solid Share** – open-source, NLnet-funded Android app demonstrating active GitHub portfolio and modern OSS practices.

Android Engineer

Green Wallet

Feb. 2021 – Jan. 2022

Remote – London, UK

- Primary contributor to the B2C consumer app and builder of most of the B2B companion, both in Kotlin (MVP); collaborated cross-functionally with design, product, and backend. Built the payment flow – biometric + PIN auth, camera card scanning (card.io), and a 3-D Secure step with card tokens isolated to a separate PCI-scope gateway.

Android Engineer

HafHashtad

Dec. 2018 – Sep. 2020

Tehran, Iran

- Engineered **Hamoon** super-app on a bespoke platform with a **dynamic module loading** system – feature code class-loaded from downloaded APKs, plus a server-driven XML UI – so the shipped shell stays lean and features change without Play Store releases.
- Rewrote **Eways** e-payment platform into a multi-module MVVM architecture in Kotlin/Java (RxJava 2, Room); built a disciplined unit-testing setup (custom RxJava scheduler rule; JUnit, Mockito, Robolectric, Espresso) to catch regressions before release.

Android Developer

KandaIdea

Apr. 2018 – Oct. 2018

Tehran, Iran

- Built **MobileGIS** – an open-source **GIS Android app** on OSM (drawing and measurement, OSRM routing, GeoJSON overlays, GPX export) – and built **EsfahanCartoMap** for Isfahan Municipality on the Google Maps API with GPS-verified field reporting and SignalR real-time updates.

EDUCATION

Politecnico di Torino

M.S. in Computer Engineering, Software – Ranked #92 globally (QS 2024)

Turin, Italy

Sep. 2021 – Apr. 2025

- Thesis: “*Integrating Solid Project into Native Android Development*” supervised by Dr. Antonio Vetrò, in collaboration with PonderSource, funded by NLnet. Published as **Android Solid Services**.

Shahid Beheshti University (SBU)

B.S. in Computer Engineering – Ranked top 6 universities in Iran

Tehran, Iran

Sep. 2015 – Sep. 2020

PROJECTS

Android Solid Services | *Kotlin, AIDL/Binder, Jetpack Compose, Hilt, OAuth2, DPoP*

2025

- Open-source three-component Android SDK ecosystem (NLnet-funded M.S. thesis): background auth service, a **client library on Maven Central** for third-party app integration via IPC, and a standalone API library. Designed expressive developer-facing APIs, went deep into the Android IPC stack (AIDL/Binder), and shipped a reference sample app.

MobileGIS | *Java, MVVM, OSMDroid, OSMBonusPack, OSRM, RxJava 2, Realm*

2018

- Full-featured open-source **GIS Android app on OSM**: interactive maps, polygon/polyline drawing and measurement, OSRM route finding, GeoJSON overlays, GPX location-history export, and configurable tile layers – designed as a reusable base for downstream projects.

Worker Mobile Robot | *C++, C, Arduino, OpenCV*

2017

- Designed and built an autonomous robot in **C++** with OpenCV-based object recognition, sensor processing, decision graphs, and arm control. National Skills Competition, Mobile Robotics, 3rd place.

TECHNICAL SKILLS

Languages: Kotlin, Java, C/C++, Python, JavaScript, SQL, Scala

Maps & Geospatial: MapLibre SDK, OpenStreetMap (OSM), OSMDroid, OSMBonusPack, Google Maps API, KML, geocoding, route finding

Android: Android SDK, Jetpack Compose, Clean Architecture, MVVM, **AIDL/Binder/IPC**, Hilt, Dagger, Coroutines/Flow, RxJava, Room, DataStore, WorkManager, Navigation Compose, CameraX

SDK & API Design: Library publishing (Maven Central), multi-process architecture, public API design, OpenID Connect, OAuth2, DPoP

Testing & Performance: JUnit, Mockito, Robolectric, Espresso, TDD, profiling, battery/overdraw optimization, CI/CD, Retrofit, OkHttp, Firebase, OpenCV, Git, Linux