

Mohamed Hafez

Android Developer | Mobile Application Developer | Software Engineer, Mobile

Kotlin · Java · Jetpack Compose · MVVM & Clean Architecture · Firebase · Google Play

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Legally authorized to work in Canada for any employer — no sponsorship required. Open PGWP valid to June 2029.

Summary

Android Developer with **5+ years** building and shipping native Android applications — **9 delivered end-to-end** and **4 published to Google Play**. Strong in **Kotlin** and **Java** with **MVVM** and Clean Architecture, **Retrofit/OkHttp** REST integration, **Room/SQLite** offline-first storage, **Firebase**, and **Material Design**. Owns the full release cycle including Play Console signing, staged rollouts, and crash/ANR triage. Integrated OCR, computer vision, and API-based ML inference into production apps, backed by an **M.A. in Information Systems & Technology**.

Technical Skills

Languages: Kotlin, Java, SQL, Dart, Python, XML

Android: Android SDK, Android Studio, Jetpack Compose, XML layouts, Material Design, Coroutines, RxJava, Room, WorkManager, Navigation, View Binding, custom UI components, responsive and accessibility-conscious layouts

Architecture: MVVM, MVP, MVC, Clean Architecture, dependency injection (Hilt/Dagger), offline-first design, threading and performance tuning

Integration: REST, JSON, Retrofit, OkHttp, Firebase (Authentication, Realtime Database, Firestore, Analytics, FCM), push notifications, Google Maps and Location, authentication flows, background synchronization

Storage: Room, SQLite, persistent preferences, local caching

Test & Release: Gradle, JUnit, Mockito, Espresso, Robolectric, AAB/APK builds, app signing, Google Play Console, staged rollouts, crash and ANR triage

Ways of Working: Agile, Scrum, weekly sprints, daily standups, Trello, Azure DevOps, Git, GitHub, code review, client scoping and estimation

Android Development Experience

Freelance Android Developer

Jul 2019 – Jun 2024

Self-Employed / Client Projects

Remote — Cairo, Egypt

- Delivered **9** Android applications end-to-end for startups, business owners, and individual clients using **Kotlin** and **Java** with **MVVM/MVP** and Clean Architecture, **Retrofit/OkHttp**, **Room/SQLite**, **WorkManager**, and **Firebase**.
- Published **4** applications to **Google Play**, owning the full release cycle: AAB signing, store listings, staged rollouts, production updates, analytics checks, and crash/ANR triage.
- Implemented **REST** integration, authentication flows, offline-first caching, background synchronization, push notifications, search and filter flows, and **Maps/Location** features.
- Built custom UI components and **Material Design** screens with responsive layouts and accessibility-conscious flows; handled performance tuning, threading, and offline storage.
- Integrated **OCR**, computer vision, and API-based **ML inference** into mobile experiences, including near-real-time assistive workflows with text-to-speech output.
- Owned client communication, scoping, estimation, delivery, and dedicated post-launch support.

Additional Engineering Experience

Graduate Researcher — Machine Learning & NLP

Sep 2024 – Apr 2026

York University, CERAS Lab

Toronto, ON

- Built **Python** ML/NLP pipelines and a reproducible evaluation framework benchmarking transformer architectures; developed data-validation and label-quality tooling over a unified 19-entity schema.

Software Engineer — ECM Consultant

Aug 2023 – Sep 2024

BASS, an enterprise content management consultancy

Cairo, Egypt

- Built **Java/Spring Boot** microservices exposing **REST** and **SOAP** APIs on embedded **Tomcat**; implemented enterprise document workflows in **OpenText Documentum** and delivered in **Agile** weekly sprints using **Trello** and **Azure DevOps**.

AI & ML Specialist

Jun 2021 – Aug 2023

DotPy

Cairo, Egypt

- Delivered applied **Python** machine learning solutions end to end — forecasting, segmentation, recommendation, sentiment analysis, and image classification — with **Dockerized** services, **REST/JSON** contracts, and **Agile** weekly sprint delivery.

Teaching Assistant & Technical Instructor

Jun 2019 – Apr 2026

York University; CIC, DotPy Academy, and private instruction

Toronto, ON | Cairo, Egypt

- Taught **200+ hours** across six institutions in Data Structures, Java/OOP, and AI/ML, and served as Teaching Assistant in Data Visualization and Systems Architecture at York University — demonstrated ability to explain complex technical material to non-expert audiences.

Projects

Published Android Applications | *Google Play* 2019 – 2024

- **Dostava Delivery** (Java, MVVM, Retrofit, Room, Firebase, Maps) — on-demand courier app: order creation and assignment, live status tracking, push notifications, offline-first caching, background sync, and map routing.
- **Your Life Is My Life** (Kotlin, MVVM, Retrofit, Firebase Auth/Analytics) — private wellbeing companion with accessible UI, secure authentication, and safe local storage.
- **Healthy Habit / Food Planner** (Java, MVP/MVVM, Room/SQLite, WorkManager) — recipe CRUD, meal scheduling, shopping lists, offline storage, and reminders.
- **The Death Ninja** (Java, Unity, Play Console) — action game with rendering and input-latency optimization, crash/ANR triage, AAB signing, and staged rollout.

Additional Android Applications | *Kotlin, Java, MVVM, Retrofit, Room, Firebase* 2019 – 2024

- **Shop on the Go** (Kotlin) — e-commerce app with catalogue, search and filter, cart and checkout, payments, multi-currency support, wishlists, and analytics events.
- **Mercato Star Finder** (Java) — football talent showcase enabling players to present their skills so club agents can scout and sign them.
- **Weather Checker** (Kotlin, Coroutines, Charts) — geolocated hourly and daily forecasts with caching, charting, and graceful error states.
- **Search for Eats** (Java, Maps) — restaurant discovery with map and list views, category filters, rating sort, and offline recent results.

Dive Simulation & Safety Profile Planner | *Android (Java, XML), Firebase, Python, Google Maps, OpenWeather* 2024

- Built a native Android application for recreational scuba dive planning using **Java** and **XML**, with **Firebase Realtime Database** as the live cloud data layer and **Firebase Authentication** for registration, Google sign-in, and email verification.
- Integrated **Google Maps** and **OpenWeather** for location-based forecasts, plus a dive logbook, Maximum Operating Depth calculator, accident reporting, and nearby-hospital search; consumed an ML safety-classification API over **POST**.

Mind's Eye — Assistive Smart-Glasses System | *Android (Java), Arduino, OpenCV, Tesseract OCR, REST APIs* **Capstone — Grade A+**

- Delivered **80%+** of a wearable assistive system for visually impaired individuals and Alzheimer's patients, integrating mobile, embedded, and cloud components for face, object, and currency detection with OCR-driven text-to-speech.
- Implemented **Egyptian currency recognition entirely from scratch** — recognition pipeline, denomination classification, and audio confirmation — as no existing solution covered Egyptian banknotes.

Education

York University — M.A. Information Systems & Technology Sep 2024 – Apr 2026

Thesis: ASC-PIE — An Evaluation Framework for PII-Aware Named-Entity Recognition Toronto, ON

- Focus areas: Machine Learning, NLP and Named-Entity Recognition, Large Language Models, and privacy-aware AI systems. Supervised by Prof. Marin Litoiu, CERAS Lab.

Helwan University — B.Sc. Computer Science & Artificial Intelligence Sep 2018 – Jun 2022

Excellent with Honors | Ranked 2nd in class | GPA 3.72/4.0 Cairo, Egypt

- Major: Computer Science. Minor: Information Systems. Capstone graded A+.

Information Technology Institute (ITI) — Mobile Application Development (Android) Mar 2023 – Jul 2023

Professional certificate: Android engineering, REST integration, MVP/MVVM, Git workflows Cairo, Egypt

Certifications & Awards

AWS Machine Learning Foundations — Udacity, 2022 **Excellent with Honors** — 2nd in class, GPA 3.72/4.0

Mobile Application Development (Android) — ITI, 2023 **Capstone Grade A+** — Mind's Eye

Certified Ethical Hacker (CEH) — Training Programme — Inspire Academy, 2022 **ICPC Contestant** — 2019, 2020, 2021

Languages: English (Professional proficiency), Arabic (Native)