

MOHAMAD ADIB TAWIL

Software Engineer & Flutter Developer

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Location: Remote (Syria, UTC+3)

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GitHub: <https://github.com/Mohamad-Adib-Tawil>

Portfolio: <https://mohamad-adib-tawil.github.io/CV>

Status: Available for Freelance | Open to Full-time / Contract (Remote)

PROFESSIONAL SUMMARY

Flutter developer with 4 years designing, building, and shipping production mobile apps to Google Play and the App Store — including a live social-audio platform that surpassed 5,000+ downloads.

Specialized in Clean Architecture, BLoC/Cubit state management, and offline-first systems, with deep hands-on work in real-time audio/chat (ZEGOCLOUD, LiveKit, WebSockets), on-device ML/OCR, and multi-backend integration (Supabase, Firebase, Appwrite). Owns the full mobile

lifecycle end-to-end: requirements, architecture, UI, backend integration, performance tuning, and store release. Grounded in a software-engineering

foundation: systems analysis, databases, algorithms, and OOP.

WORK EXPERIENCE

Flutter Developer — Independent & Contract (Remote) 07/2022 – Present

- Designed and shipped 5+ production Flutter apps end-to-end across social-audio, marketplace, document-management, and content domains — owning architecture, state management, backend integration, performance, and store release on Google Play and the App Store.
- Built a real-time social-audio platform (LKLK) architected for up to 500 listeners and 20 mic seats per room, integrating dual audio SDKs (ZEGOCLOUD + LiveKit) and three concurrent realtime channels (Appwrite Realtime, WebSockets, ZIM) with per-channel reconnect and exponential backoff; app surpassed 5,000+ downloads.
- Engineered the app's monetization and engagement stack: in-app purchases (6 coin tiers), an SVG/VAP virtual-gift animation engine (concurrency-capped at 8, sub-100 ms queue interval), VIP tiers, and gamified progression.
- Delivered a bilingual (AR/EN) car marketplace (Wolfera) on Supabase (PostgreSQL with Row-Level Security, Auth + Google/Apple SSO, Realtime chat, Storage), with on-device TFLite image moderation, FCM price-drop alerts, and advanced search across 15+ filters with infinite scroll.
- Built an offline-first document scanner (Office Archiving) with a dual-engine OCR pipeline (Google ML Kit + Tesseract) for Arabic/English — multi-orientation, preprocessing, best-result scoring — plus a full PDF toolkit (watermark, sign, password-protect) and SQLite full-text search, all on-device with no backend.
- Standardized engineering across apps: Clean Architecture with feature-based modules, BLoC/Cubit + GetIt/Injectable, typed Either error handling, offline-first caching with pagination and 3-retry exponential backoff, and isolates/background tasks for OCR, PDF, and audio.

- Hardened releases with app flavors, ProGuard/R8, secure storage, environment separation, and Crashlytics crash filtering; published and maintained apps on both Google Play and the Apple App Store.

Android Developer (Kotlin) — University & Independent Projects 2022

- Built "Ana Mubarmej": curated learning tracks for 8 languages, an in-app WebView code console, and auto-graded quizzes with scoring.
- Graduation project: a programming-education platform (courses, articles, and runnable code samples).

Windows Application Developer — University Projects 2021 – 2022

- Delivered two warehouse-management systems (Faculty of Pharmacy; Faculty of Science / Chemistry) in Windows Forms — both recognized by their deans, with a University of Aleppo Presidency commendation for the latter.

FEATURED PROJECTS

LKLG — Real-time Social Audio Platform (Production, Google Play)

Tech: Flutter · flutter_bloc (Cubit) · GetIt · ZEGOCLOUD · LiveKit · ZIM · Appwrite · Dio · Hive · in_app_purchase

- Shipped a production Arabic-market live-audio app (Clubhouse/Yalla category), architected for up to 500 listeners and 20 mic seats per room — surpassed 5,000+ downloads over 80+ iterative releases.
- Integrated dual audio SDKs (ZEGOCLOUD ZegoExpress + LiveKit) behind an AudioRepository interface, enabling SDK switchover as a DI change, not a rewrite.
- Built a virtual-gift engine (SVGA + VAP alpha-video) with a queue manager capped at 8 concurrent animations and asset pre-download — eliminating frame drops during gift bursts.
- Implemented a coin economy (6 IAP tiers), VIP system, and gamification on a feature-based Clean Architecture with GetIt + global MultiBlocProvider.
- Play Store: <https://play.google.com/store/apps/details?id=com.bwmatbw.lklklivechatapp>

Wolfer — Bilingual Car Marketplace (Production, Google Play + iOS)

Tech: Flutter · Supabase · Firebase (FCM/Crashlytics) · BLoC/Cubit · GoRouter · GetIt + Injectable · Freezed · TFLite

- Built a full AR/EN marketplace for buying, selling, and renting cars (6 rental pricing tiers), with an admin approval workflow enforced by Supabase Postgres Row-Level Security — moderation without a separate web panel.
- Implemented multi-provider auth (email, Google, Apple Sign-In with SHA-256 nonce flow) against Supabase, plus real-time buyer-to-seller chat over Supabase Realtime — no third-party messaging SDK.
- Shipped on-device TFLite NSFW moderation with a fail-open design, and targeted FCM price-drop alerts that diff six price fields and notify only users who favorited the car.
- GitHub: <https://github.com/Mohamad-Adib-Tawil/Wolfer>
- Play Store: <https://play.google.com/store/apps/details?id=com.wolfer.wolfer>

Office Archiving — Offline Document Scanning & OCR (Production, Google Play)

Tech: Flutter · flutter_bloc (Cubit) · SQLite (sqflite) · Google ML Kit · Tesseract OCR · pdf · printing · flutter_doc_scanner

- Built a fully on-device document manager (no account, no cloud) with a custom multi-candidate OCR engine: runs ML Kit + Tesseract across 4 orientations and 3 preprocessing variants, then scores and selects the best result — reliable extraction on mixed Arabic/English scans.
- Shipped a complete PDF toolkit (create, edit, rotate/reorder, watermark, canvas signature, password-protect) and SQLite full-text search across OCR text.
- Engineered memory-safe PDF processing (page/DPI/size caps + streamed rasterization) that survives large files on mid-range Android, and additive-only SQLite migrations that never break existing users.
- GitHub: https://github.com/Mohamad-Adib-Tawil/office_archiving
- Play Store: https://play.google.com/store/apps/details?id=com.werewolf.office_archiving

Quran Ahmed Karasi — Offline Quran Reader & Audio (Production, iOS + Android)

Tech: Flutter · flutter_bloc (Cubit) · GetIt · just_audio · audio_session · background_downloader · quran_library

- Published on both the App Store and Google Play — an offline-capable reader and audio app with Surah/Juz/Hizb navigation and a personal study hub.
- Designed an explicit audio state machine (8-phase enum over just_audio streams) with OS audio-focus, speed/repeat/sleep-timer, and stable-phase buffering — no UI flicker while the engine buffers.
- Optimized rebuilds with buildWhen/BlocSelector against high-frequency position streams, and added HTTPS + allow-listed-domain validation on every audio URL.
- App Store: <https://apps.apple.com/app/id6759857104>
- Play Store: <https://play.google.com/store/apps/details?id=com.ahmadkarasi.quran&pli=1>

Code Book — Offline-First Digital Library (Clean Architecture reference)

Tech: Flutter · flutter_bloc (Cubit) · Dio · Google Books API · Hive · GetIt · GoRouter · WebView · dartz

- Cross-platform book-discovery app on strict 3-layer Clean Architecture with a generic UseCase<Result, Param> base and dartz Either typed failures.
- Offline-first Hive cache (per-category x per-sort isolated boxes) for instant cold-start; every network call retried 3x with exponential backoff.
- Debounced search (400 ms) with multi-dimension filters and infinite scroll, and an in-app WebView reader with HTTPS enforcement on every redirect.
- GitHub: <https://github.com/Mohamad-Adib-Tawil/Code-Books->

CORE SKILLS

Languages: Dart, SQL, C# (academic), Kotlin (basic)

Mobile & UI: Flutter, Material 3, Android, iOS, responsive UI, RTL & localization (AR/EN), image optimization

Architecture & State Management: Clean Architecture, SOLID, MVVM, feature-based modules, BLoC, Cubit, Provider, GetIt, Injectable, Freezed, dartz/Either

Backend & APIs: REST, Dio (interceptors, retry/backoff), WebSockets, Supabase (PostgreSQL, Auth, Realtime, Storage, RLS), Firebase (Auth, FCM, Analytics, Crashlytics), Appwrite

Real-time & Media: ZEGOCLOUD (ZegoExpress), LiveKit, ZIM, just_audio, audio_session, SVGA/VAP animation, background_downloader

Storage & Offline: Hive, SQLite (sqflite), secure storage, offline-first caching, pagination, stale-while-revalidate, typed failures

On-device ML & Documents: Google ML Kit, Tesseract OCR, TFLite, PDF generation/editing, printing, full-text search

Release & Quality: App flavors, ProGuard/R8, Crashlytics, secure storage, environment separation, isolates & background tasks, in-app purchases, Google Play & App Store publishing

Navigation & Tools: GoRouter, Git, GitHub, Postman, Figma, build_runner / codegen

KEY ACHIEVEMENTS

- Designed and shipped 5+ production apps to Google Play and the App Store
- Built real-time social-audio rooms supporting up to 500 concurrent listeners and 20 mic seats using ZEGOCLOUD + LiveKit
- Delivered one public app (LKLK) with 5,000+ downloads over 80+ build releases
- Implemented a custom dual-engine OCR pipeline (ML Kit + Tesseract) for reliable Arabic/English extraction on mixed real-world documents
- Engineered offline-first flows with Hive, SQLite, pagination, stale-while-revalidate, 3-retry exponential backoff, and typed Either failures
- Shipped on-device TFLite image moderation and production-grade PDF security tooling

ADVANCED ENGINEERING CAPABILITIES

- Clean Architecture with feature-based modules and strictly separated UI, domain, and data layers — applied across 5 production apps
- Offline-first systems using Hive, SQLite, pagination, stale-while-revalidate caching, and typed failure responses
- Real-time integrations with WebSockets, Supabase Realtime, ZEGOCLOUD ZegoExpress, and ZIM signaling — with per-channel reconnect logic
- On-device ML pipelines: OCR (ML Kit + Tesseract), TFLite inference, multi-candidate scoring, and memory-safe PDF rasterization
- Production release engineering: flavors, ProGuard/R8, Crashlytics, secure storage, environment separation, isolates, and background tasks

SERVICES OFFERED

- End-to-end mobile app development (iOS & Android) from concept to store
- Clean Architecture design: feature-based modules, BLoC/Cubit, DI setup
- Real-time features: audio rooms, messaging flows, WebSockets, Supabase Realtime
- OCR and document workflows: ML Kit, Tesseract, SQLite, PDF generation/editing
- Offline-first architecture: caching, retry handling, predictable error states
- Backend integration: Supabase, Appwrite, Firebase, REST APIs
- Store publishing and production build preparation (Google Play & App Store)

ADDITIONAL TECHNICAL EXPERIENCE

CS & Engineering Foundations: Data Structures & Algorithms, OOP, Software Engineering, Systems Analysis & Design, relational database design, SQL, UML diagrams, SDLC, requirements analysis and technical documentation

Android System Experience: ROM flashing (official and custom), Recovery/Bootloader operations, system-level diagnostics — hands-on experience across multiple devices

EDUCATION

Diploma (2-yr) in Computer Engineering — Focus: Software Engineering University of Aleppo, Aleppo, Syria | 2020 – 2022 | GPA: 82.89%

Coursework: Data Structures, Algorithms, OOP, Database Systems, Software Engineering, C#.

Final Project: Udemy-style programming-education platform (web, Windows, mobile).

LANGUAGES

Arabic — Native | English — Professional working proficiency