Chalanthorn Chanmathikornkul (Jojo)

jojoclt | jojochalanthorn | cltms01@gmail.com | +886 933483854 | Taipei, Taiwan | Blog: jojonosaur.us

WORK EXPERIENCE

Summary: Android engineer specializing in Jetpack Compose rewrites, secure mobile architecture, Coroutines, and native/ML integrations. Experienced with Kotlin DSL, build flavors, R8 optimization, Firebase analytics, and JNI/C++ pipelines for high-performance on-device inference.

Tri Service General Hospital, Digital Medical Center (AI) _Taipei, Taiwan_
Android Developer **09/2024 – Present**

- **Rebuilt the 100K+ user TSGH Helper app on a completely new codebase**, delivering a Jetpack Compose + MVVM architecture **built on Coroutines and Flows**, bilingual (Chinese/English) modernization, and selectively migrating critical legacy features.
- **Boosted product stability and user satisfaction**, raising the Play Store rating from **3.2 to 4.8** and reducing crash rates from **1% to 0.05%** through Firebase Analytics, Crashlytics, controlled rollouts, and forced-update flows.
- **Implemented enterprise-grade mobile security**, adding JWT session management with encrypted persistent storage, biometric verification, and protection against screenshots/overlays aligned with modern best practices.
- **Engineered native on-device ML**, deploying a legacy MXNet ECG model via Apache TVM with a **custom C++ runtime + JNI bridges**, resolving ABI mismatches, linker issues, and NDK compatibility challenges.
- **Integrated critical external SDKs**, including Webex, bridging legacy Android Views with modern Compose UI for seamless interoperability.
- **Strengthened engineering quality**, adding JUnit 5 + Robolectric tests, UI tests, and Gradle/R8 optimizations, reducing regressions across mission-critical features.

Tech Stack: Kotlin, Jetpack Compose, Coroutines, Flow, Hilt, Retrofit, WorkManager, Firebase (Crashlytics/Analytics), JUnit 5, Robolectric, OKHttp, WebSocket, C++ (NDK), JNI

Frontier.cool _Taipei, Taiwan_
AI Engineer Intern **07/2023 – 06/2024**

- **Model Development:** Developed and deployed a textile classification, improving accuracy **from 50% to 85%** using PyTorch and AWS Lambda.
- **API Development:** Deployed a production-level machine learning model **API** on AWS Lambda for textile classification.

Tech Stack: PyTorch, Docker, AWS Lambda, AWS S3, Postman, Python, OpenCV

National Tsing Hua University _Taipei, Taiwan_
Private Tutor **09/2023 – 06/2024**

- **Tutoring:** Aided 5 students in Python, C, Computer Architecture (RISC-V), and SQL.

EDUCATION

National Tsing Hua University, _BS, Electrical Engineering and Computer Science_ _Hsinchu, Taiwan_

- GPA 3.91/4.3 (Top 6/34) | Academic Excellence Award 2023 | Scholarship 2020 - 2024 **2024**

PROJECTS

TaipeiTrash (Play Store) **Tech Stack:** Kotlin, Jetpack Compose, Google Maps SDK, Room **2025**
A city utility app that helps residents locate nearby garbage trucks and public trash bins.

Compiler Design Tech Stack: Lex, Yacc, C, Linux **2024**
Developed a C Compiler, implementing lexical analysis, parsing, semantic analysis, code generation, and optimization.

Lifeline (Android Developer, UX/UI Designer) **Tech Stack:** Kotlin, Jetpack Compose, SQL, Hilt, Figma **2022**
An Android to-do application designed to enhance users' planning by prioritizing tasks based on duration and deadlines.

AWARDS

Thailand Olympiad in Informatics: Competitive Programming (C++), Bronze Medal **2019**

NECTEC: Thailand National Software Contest An app to simplify work attendance using geofencing in Java. **2017**

SKILLS & INTERESTS

Languages: Thai (Native), English (Fluent) (TOEIC – 910/990, TOEFL iBT – 96/120), Chinese (Intermediate)

Technical Skills:
Programming: Kotlin, C++, Python, Go, SQL, Java
Frameworks: Jetpack Compose, Hilt, Retrofit, Supabase, Firebase
Tools: Git, Docker, AWS Lambda, Linux