Chalanthorn Chanmathikornkul (Jojo)

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WORK EXPERIENCE

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

Led the complete rewrite and bilingual modernization (Chinese/English) of **the TSGH Helper** app **(100K+ installs),** using Kotlin, MVVM, Jetpack Compose, Coroutines, and Flow**,** including architecture overhaul, localization pipeline, and full Play Store release management (versioning, internal testing, staged rollouts, and production publishing).

- **Delivered core features across** authentication, appointments, payments, telemedicine, and report viewing.
- **Testing & Code Quality:** Implemented unit tests (JUnit 5, Robolectric) and end-to-end tests, improving coverage and reducing regressions across mission-critical features.
- **Authentication:** Integrated JWT-based authentication with encrypted local storage for secure, consistent sessions.
- **Product Impact & Reliability**:
  o Raising Play Store rating from **3.2 to 4.7 stars** within months of release.
  o Cutting crash rates from **1 % to 0.05 %** by integrating Firebase Crashlytics, Analytics, and a force-update system for proactive monitoring and controlled rollouts.
- **Security & Compliance:**
  o Achieved **OWASP MASVS Level 3** compliance, ensuring enterprise-grade mobile app security.
  o Integrated **biometric authentication** for sensitive actions such as payments and telemedicine features.
- **Model Deployment:** Deployed a legacy MXNet model for ECG Classification on Android via TVM, a custom C++ runtime, leveraging compiler internals knowledge to resolve ABI compatibility and linker issues between JNI and NDK libraries.
- **SDK Interoperability:** Integrated the Webex SDK into the app, bridging legacy Android Views with Compose-based logic.

Tech Stack: Kotlin | Coroutines | Flow | Jetpack Compose | Hilt | Retrofit | WorkManager | Junit 5 | OKHttp | WebSocket

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 | Git | 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 | Makefile | 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