

Professional Summary

Software Engineer with 6 years' experience, specialized in iOS, iPadOS and Apple ecosystem, building high performance applications for sport monitoring and tracking devices, data acquisition instruments and energy management solutions. Experienced scrum master and project management with outstanding troubleshooting skills. Able to deliver results efficiently. Latest iOS app - <https://github.com/WilliamTYYA/Ryokou>

Technical Skills

- **Swift** (iOS, macOS)
 - UI/UX : **SwiftUI**, **Animations** (Transition, GeometryEffect), **Observable** dataflow and **UIKit**
 - Database : **SwiftData** (Relational DB, Migration), **CoreData**, **AppStorage** and **SceneStorage**
 - Concurrency : **Swift Concurrency** (Async/Await, Task, Actor), **AysncSequence**, **Combine** and **GCD**
 - Unit Testing/ Debugging : **XCTest**, **Swift Testing** (View-Model, Concurrency), **Profiler**
 - Camera : **AVFoundation**, **CoreImage**, **PhotosUI**, **Vision**, **AysnclImage**
 - Frameworks and APIs : **MapKit**, **CoreLocation**, **Calendar**, **WidgetKit**, **SpriteKit**, **StoreKit**, **AppIntents**
 - Privacy : **AuthenticationServices**, **LocalAuthentication** (Biometrics FaceID, TouchID)
 - Networking : **Network**, **URLSession** (REST API), **Codable** (Json Parsing), **Core Bluetooth**
 - Artificial Intelligence : **Foundation Models**, **CoreML**
 - Design Patterns : **MVVM**, **Singleton**, **Repository** Pattern, **VIPER** architecture
- **Android (Kotlin)** : **Jetpack Compose**, **Coroutine**, **Retrofit**, **ROOM DB**, **DataStore**, **Work Manager**
- Programming Languages : **Swift**, **Objective-C**, **Java**, **Python**, **C#**, **C++**, **TypeScript**
- Cloud Computing
 - **Firebase** (**Authentication**, **App Distribution**, **Crashlytics**, **Firestore**, **Firestorage**, **FirebaseAILogic**)
 - **AWS** (**S3**, **EC2**, **CloudFront**, **Lambda**, **API Gateway**, **CloudFormation**, **CodePipeline**)
- Tools : **Xcode**, **Jira**, **Agile Scrum**, **Visual Studio**, **JupyterLab**, MS office 365 Apps, MS SQL Studio

Experience

Senior iOS Software Engineer, Rapsodo Sports, Singapore | Aug 2022 – May 2025

- Developed and maintained the MLM2 Pro launch monitor and golf simulator app, which processes live player sessions and deliver real-time insights and feedback.
- Maintained, and enhanced the Rapsodo Diamond iOS app for Rapsodo's V3 Pro hardware, an advanced baseball athlete performance monitoring platform.

- Led the development of the In-Game Field Calibration applications for Rapsodo's MLB baseball and cricket products using Swift and SwiftUI, eliminating the manual field-calibration setup process.
- Built a robust multithreaded system using Swift Concurrency and integrated Firebase cloud services to synchronize clients' sessions through premium on-demand analytics subscriptions.
- Implemented firmware-update workflow and manual IP configuration using C++ library bridged with Objective-C.
- Collaborated globally with functional teams, BAs and PMs to deliver high-quality software solutions.

Senior Software Engineer, Tesla Consulting, Singapore | Nov 2021 – Aug 2022

- Built scalable RESTful APIs for Keppel Electric and Sembcorp Gas systems using C# and .NET, automating complex currency exchange rate, transactions, invoicing and multi-currency billing.
- Managed data migration using MS SQL and Stored Procedures and developed reporting APIs with C# and SQL.
- Created an internal API testing portal with JavaScript, HTML and CSS.

iOS Software Developer, Gantner Instruments, Singapore | Nov 2020 – Nov 2021

- Developed robust communication APIs, facilitating seamless interaction with Q Station products through bridging Objective-C with C++ library.
- Designed visually appealing, user-customizable dashboards for managing real-time, high-speed data from Q Station products, utilizing a proficiently designed multi-threaded process with dynamic data configuration capabilities.
- Integrated Firebase Cloud Messaging to deliver real-time user alerts upon Q Station data exceeding or failing below predefined thresholds.

Personal Project, Ryokou (Apple on-device AI powered Trip Itinerary planning app) | Oct 2025 – Nov 2025

- Discovers flights and hotels within user-defined budgets by fetching data from external APIs through **FoundationModels** Tool, then feeds structured inputs to Apple AI models.
- Generated day-by-day trip itineraries, will be saved as for the destination city through **FoundationModels**, guided by the user's data range and hotel locations, rendered in polished, animated **SwiftUI** views.

Education

Master of Science in Computer Science, Maharishi Internation University | Nov 2024 – Jun 2027

- In progress via distance education; expected completion 06/2027
- Key Courses: Algorithms, Mobile Device Programming, Big Data, Cloud Computing, Enterprise Architecture

Diploma in Computer Engineering, Temasek Polytechnic, Singapore | April 2018 – April 2021

Key Courses: C++, Artificial Intelligence (AI), Internet of Things (IoT), Java, Android Development, Data Visualization & Analytics, Microcontroller Applications, Electronic Devices & Circuits

Certificate - Harvard AI Certificate