

LEONARD CHEN

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EDUCATION

McMaster University

September 2024 - April 2026

Master of Engineering (Co-op) in Computing & Software

Relevant Coursework: Parallel & High-Perf. Computing, (Micro)service-oriented architectures

Research: Numerical Methods, Automatic Differentiation (Under Prof. Ned Nedialkov)

Changzhou Institute of Technology Bachelor of Engineering

2016 - 2020

EXPERIENCE

Alibaba Group (NYSE: BABA)

June 2022 - August 2024

iOS Software Engineer

Hangzhou, China

- Developed and maintained the [Freshippo](#) iOS App, a high-traffic grocery shopping platform similar to Costco and Sam's Club, supporting over 400 stores with 5 million daily active users.
- Developed and led the implementation of a smart in-store navigation system for Freshippo X Membership Stores, leveraging C/C++, Bluetooth&Beacon technology, and ESP32 with FreeRTOS to enable precise indoor positioning and device communication, reducing product-finding complaints by 40%.
- Enhanced team efficiency by implementing static code scanning to identify unused code, restructuring the dependency hierarchy, and optimizing the CI/CD pipeline with CocoaPods plugins and command-line tools.
- Leveraged LLVM Pass, clang, ld and other toolchains to optimize compilation outputs, reducing app size from 120MB to 93MB, enabling faster iterations and significantly enhancing the user download experience.
- Applied Apple's latest accessibility technologies in the Freshippo App, incorporating dynamic font resizing, VoiceOver, and multimedia accessibility for improved universal usability.

Tuya Inc. (NYSE: TUYA) – Equivalent to SmartThings by Samsung

November 2020 - February 2022

iOS Software Engineer

Hangzhou, China

- Developed and maintained the [Tuya Smart](#) App, a comprehensive smart home platform supporting millions of IoT devices globally, enabling seamless control and automation for diverse smart home ecosystems.
- Developed an automated SDK management and publishing platform, utilizing Java, Spring, Python, and Ruby to streamline SDK builds and distribution to platforms like CocoaPods and Swift Package Manager, reducing SDK release time by 70% and operational overhead significantly.
- Proposed, designed, and developed an IoT hardware simulation platform, utilizing Docker-based virtualization, C/C++, Shell scripting, and Bluetooth LE protocols to emulate smart device firmware (e.g., ESP32), supporting 4 communication channels (LAN, Zigbee, Bluetooth LE, and Bluetooth LE Mesh) and increasing developer efficiency by 50% through reduced reliance on physical hardware for testing.
- Led the company macOS(darwin) VPN Transformation Project, enhancing VPN stability and usability to increase connection success rate from 70% to 98% through a robust rewrite in Objective-C++.

CAREER HIGHLIGHTS

Personal Open Source Project: Parma (GitHub 700+ Stars)

Project Owner

- Developed 'Parma', a SwiftUI Markdown rendering engine, open-sourced on GitHub. The project, accessible at [Parma on GitHub](#), focuses on utilizing pure SwiftUI for rendering Markdown content.
- Achieved recognition by featuring in iOS Dev Weekly (issue 470), iOSGoodies (issue 348), and Old Driver iOS Weekly (issue 127). Garnered over 700 stars on GitHub. The project received commendations and promotion from [Mr. John Gruber](#), the principal designer and developer of the Markdown language.

SKILLS

Programming Languages

C/C++, Swift, Python, Ruby, Java, arm64 Assembly, Shell Scripting

Frameworks

LLVM, UIKit, SwiftUI, Metal, ESP-IDF, Vulkan, OpenGL, ImGui, Spring

Tools & Other

CLion, Xcode, CMake, Disassembler, Docker, Bluetooth, MQTT, FreeRTOS