BRIAN LIN

Software & Embedded Systems Engineer

EXPERIENCE

Apple | Cupertino, CA — *July 2021– Present*

Software Engineer, Sensing and Connectivity – Motion, Health Software Algorithms

- Maintain and enhance motion related and functional capacity health algorithms on iOS and watchOS while working closely with Quality Engineers and Program Managers to ensure timely integration (C++/Objective C)
- Develop clinical and remote health study software to enable high fidelity sensor collection for motion and cardio fitness algorithm development efforts that prompt a user's awareness to their long-term health
- Collaborate with lead scientists to implement critical pipelines and tools that support data collection protocols with internal and external study partners

Apple | Cupertino, CA — *June 2020 – August 2020*

Software Engineering Intern, Sensing and Connectivity – Motion, Health Software Algorithms

- Architect efficient short-range wireless data streaming mechanisms between multiple Apple devices with custom binary packets to decrease latency and streamline data reporting from clinical study participants
- Develop an iOS software in Swift and Objective-C that communicates with devices sensor services to monitor and validate collection process in real time to minimize critical data loss and increase productivity of studies
- Lead recurring scoping and update meetings with managers and stakeholders to prioritize feature implementation

Apple | Sunnyvale, CA — *January 2019 – August 2019*

Software Engineering Co-Op, Field Diagnostics Tools and Systems Engineering

- Developed and deployed software that power iPhone inspection fixtures in factories and repair centers while working closely with hardware vendors to meet the production timeline (start to global deployment in 6 months)
- Designed MacOS and iOS software that perform diagnosis of Apple iOS products with Swift and Objective-C
- Prototyped basic circuits to integrate sensors into hardware I/O boards and controllers
- Effectively communicated engineering requirements, documented scope, worked with legal, and demonstrated technical achievements in front of management to ensure a successful global deployment

Weight Watchers (WW) | New York, NY — *May 2018 – August 2018*

iOS Software Engineering Intern, User Authentication and Onboarding

- Built software in Agile development sprints with Swift to maintain the top-ranked WW App by accepting tickets, estimating point values, and preserving code livability with continuous integration tools
- Worked with designers and compliance officers to ensure feature implementations are secure and accessible to all
- Engaged in code reviews with senior engineers, created formal pull requests, and frequently submitted builds for quality assurance testing to deliver successful biweekly updates to the iOS App Store

EDUCATION

University of Michigan | Ann Arbor, MI — *September 2017 - April 2021*

Computer Engineering, Bachelor of Science in Engineering - GPA 3.5 Magna Cum Laude

- Focuses: *Embedded Systems, Computer-Based Control Systems*
- Key Coursework: *Advanced Embedded Systems (EECS 473), Operating Systems - Advanced Projects (EECS 482) Full-Stack Web Systems (EECS 485), Control Systems and Analysis (EECS 460), Embedded Control Systems (EECS 461)*
- University Honors, Dean's List – College of Engineering

LEADERSHIP

Intercollegiate Taiwanese American Student Association | Ann Arbor, MI — *May 2020 - Present*

Co-Executive Conference Director, Midwest Conference

Lead a team of 24 conference team directors to strategize finance, networking, marketing, and speaker logistics to ensure a successful conference of 150 attendees from schools all over the nation and Canada

PROJECTS

Smart Shoes – Diabetic Ulceration Detection System | Embedded ARM, iOS — *Aug 2020 – Dec 2020*

Project Showcase: https://cse.engin.umich.edu/eecs-473-advanced-embedded-systems-group-b/

- Prototyped, designed, assembled, and brought-up a full set of Printed Circuit Boards (PCBs) powered by STM32L4 that sampled force resistive sensors on an insole at 100Hz for diabetic patient ulceration detection and monitoring
- Engineered custom service and characteristic Bluetooth Low Energy (BLE) profiles with a BlueNRG-M2SP chip to send and receive 18-byte data packets at a high frequency between the PCB and iOS
- Utilized FreeRTOS (STM32's CMSIS) to efficiently manage scheduling of communications with the ADC, pressure-time-integral calculations, and SPI communications with the BLE chip

INFO

Contact:
pblin@umich.edu
(408) 921-9880

SKILLS

C++/C
Swift
Objective-C
Agile/Scrum
React Native
iOS/MacOS
Python
JavaScript

Embedded
ARM Assembly

Verilog HDL
FPGA
Controls
Circuits
Logic
MATLAB

PASSIONS

Avocados
Photography
Street Eats
Travel
Cruises
Sushi
Drums
Guitar
Swimming
Tropical Islands

LINKS

brianpoanlin.com
in/brianpoanlin