JOSE LEVEL

Florida International University BS in Computer Engineering 2020 | Apple Firmware Engineer
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Work Experience

HID Firmware Automation Engineer, Apple — August 2021 - Present

- Tech lead for automation and sensor system validation on Airpods 3, Beats Fit Pro, and next gen audio products.
- Support algorithm development and user experience studies by automating data gathering from 5 sensors spanning hundreds of prototype devices.
- Work with cross-functional teams to ensure sensors meet quality milestones across hardware and software layers.
- Plan and demo sensor features and automation strategy to executives at new product and status reviews.
- Directly responsible for automation efforts on 'in-ear detection' sensors for audio products.
- Support team with other human interactive sensors such as Airpod stem click and Apple Watch Crown.

Embedded Software Developement, Motorola Solutions — Jun - Aug 2020

- Expanded on the build system to compile release and test versions of firmware more easily. This increased safety of releases and streamlined the testing process significantly.
- Participated in the software development process using Agile methodologies to fix bugs and implement features ranging from buffer overflows to higher-level logic in radio commands.
- Performed "Voice of Customer" visits with the Baltimore City Fire Department to analyze feedback on prototypes. This allowed us to focus on higher demand features, improve our product design and reduce the time to market.

Software and Electronics Co-Op, GE Appliances — Jan - May 2019

- Developed Python script to interpret raw touch sensor data. My scripts allowed engineers to establish spec standards from different vendors for the hardware UI team and easily calibrate parts for testing.
- Designed capacitive touch testing rig and improved testing procedures for UI PCBs by creating an automated 3-axis button-pusher. This led to saving money in testing equipment & labor costs for UI board prototyping.

Engineering Consultant, Eco-Tabs — June 2018 - Jan 2019

- Reduced the company's large labor cost and overhead by leading the design and implementation of an automated dispensing system for bio-waste management tablets to reduce harmful H2S gasses in wastewater.
- Created a rugged system for the testing and deployment of the product in various real-world environments.

Projects

LoRaWAN Remote Lake Water Quality Monitor + Lab — Nov 2020 - Jan 2021

- Developed a LoRaWAN remote water quality monitor for suburban lakes using Python. The LoRaWAN monitors promote safer domestic water use and ecological responsibility by measuring factors such as temperature and PH.
- Designed a lab based on this project for the FIU Electrical and Computer Engineering Department which helped undergraduate IoT Network Security students learn the setup and design of LoRaWAN and its cybersecurity.

Shell Hacks, FIU (2nd Place Overall) — Oct 2020

- Designed an interface to play beer pong remotely to follow social distancing regulations. We created infrared enabled cups with a microprocessor to send data through USB Protocol and a C++ app that runs on the terminal.

IoT Bar Management System, FIU (Senior Design Capstone Project) — Sep 2019 - May 2020

- Acted as the project manager on the hardware integration and software architecture of a 4 person team by presenting the use of GitHub, and the Agile methodology to establish a CI environment.
- Personally developed software features such as Twilio SMS API integration and data dashboards on the Losant IoT platform. Our team worked together to develop the embedded software and PCB designs for the project.
- Conducted 100 customer interviews and consolidated customer feedback to define scope and timeline for our beverage inventory system which provides real-time, cloud-based data visualization on consumption in bars.

Shell Hacks, FIU (1st Place Hardware Hack, 3rd Place Overall) — Sep 2018

- Used Python and C with an embedded microprocessor and infrared sensors to monitor a fish's movement within a fish tank to record inertial data and actuate motors accordingly to move the tank in the direction the fish swims.