JOSE LEVEL

Florida International University | BS in Computer Engineering | Graduated December 2020
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Work Experience

Embedded Software Intern, 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 ranging from buffer overflow to higher-level logic in radio debugger 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.

Prototyping and Design, Only About Innovation (Consultant)   May 2016 - 2018
- Worked with business executives in distributor business expansion deals for autonomous pool surface cleaners.

Projects

LoRaWAN Remote Lake Water Quality Monitor + Lab   Nov 2020 - Present
- Developed a LoRaWAN remote water quality monitor for suburban lakes. The LoRaWAN monitors promote safer domestic water use and ecological responsibility by measuring factors such as temperature, PH, and bacterial PPM.
- 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 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.

Skills and Software

Degree concentrations: Data Systems Software, Embedded Systems, and Computer Design.
- C/C++, VHDL, Python, and Java.
- English and Spanish (Completely bilingual).
- Makefile, Jira, Git, Bitbucket, Vivado 2019/Xilinx ISE, SolidWorks/ Inventor, MultiSim, LT Spice, KiCad