Felipe Gomez Villalobos

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EDUCATION

University of California Irvine — Expected 2024
B.S. Computer Science — *Irvine, CA*
Specialization in Architecture and Embedded Systems
Minor: Informatics

Santiago Canyon College — August 2020 - June 2022
A.S. Liberal Arts: Math & Sciences With Honors — *Orange, CA*
GPA: 3.89

SKILLS

Programming

- Proficient: C++, Python
- Competent: Java, JS, Assembly - x86, RISC-V
- Familiar with AWS, WiFi Server, and cloud implementation.

Dev. Boards - Communication - Hardware

- Arduino, ESP32, Zigbee.
- I2C, SPI, Serial, NRF24L communication.
- Various Sensors - IR, motion, touch, ambient and health monitoring sensors.
- Various Actuators - Motors, servos, solenoids.

Relevant Hard Skills

- Soldering - Surface Mount and Through Hole.
- Circuit debugging.
- Reading and building circuit diagrams.

Relevant Coursework

- IoT Software and Systems.
- Computer Systems Architecture.
- Computer Organization and System Design.
- Computer Architecture and Organization

Experience

NASA L'SPACE Academy - Mission Concept Academy.- In Progress. — May 2023 - Current
Student Workforce Development Program

- Will develop a Preliminary Design Review (PDR) of a mission.
- Will earn various skill badges demonstrating proficiency in Teaming, Project Management, Risk Management, NXCAD

Projects

Remote-Controlled Rover — September 2022 - June 2023

- Designed and created the components for a remote-controlled rover.
- Designed PCB circuit for remote control - incorporating joystick and wireless communication.
- Used H-Bridge motors to orientate and move the rover.
- Used NRF24L01 to wirelessly communicate between remote control and the rover.

Smart Sprout - In Progress — 2023

- Quarter long project in IoT and embedded systems - focused on connectivity, communications and cloud integration.
- Indoor plant monitoring system designed to help users keep their plants healthy while providing actionable metrics through an online interface.
- Provides visualization and processing of data gathered from various sensors.
- Automated watering using a submersible water pump.
- Provides basic climate control through the use of ultrasonic mist generators and small fans.

Activities

Open Project Space - IEEE, UC Irvine, CA. — September 2022 - June 2023
Club Member

A year-long program held by IEEE geared toward giving undergraduate students the opportunity to get hands-on experience with embedded systems.

- Learned hardware and electrical engineering concepts centered around IoT and embedded systems.
- Year long series of projects and activities to reinforce methodology and build knowledge of electronic components, sensors, and actuators.
- Introduced to CAD and PCB design through hands-on workshops and assignments.