

MONTERRAT SANTILLAN-RODRIGUEZ

Orlando, Florida

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EDUCATION

University of Central Florida

Bachelor of Science in Electrical Engineering

Overall GPA: 3.84

August 2019 - May 2024 (expected)

Relevant Coursework

Intro to C, Embedded Systems, Linear Circuits 1 and 2, Computer Organization, Concepts of Computer Science, Electronics 1 and 2, Computer Architecture, Digital Systems, Computer Communication Networks, Linear Control Systems, Data Structures and Algorithms, Introduction to Robotics, Signal Analysis (in progress)

SKILLS

Software

EAGLE, Arduino, Code Composer, Multisim, VSCode, PuTTY / Tera Term, XCTU

Languages

C, Java, Kotlin, Python, MATLAB, HTML, CSS

EXPERIENCE

Intro to C Learning Assistant at UCF

May 2023 - Present

- Prepared weekly notes to assist students with class content based on programming with C
- Held office hours and recitation to help students with assignments such as homework

I-CON Systems, Inc. Electrical Engineering Intern

July 2022 - May 2023

- Helped in completing electrical schematics and routing printed circuit boards with EAGLE
- Created BOM and other production files for manufacturing PCBs
- Created library parts including the symbols and devices for electrical components using EAGLE
- Researched, compared, and analyzed best component options based on price, space, and application

Rowing Mechanics and Multimodal Feedback Research

September 2020 - October 2021

- Worked with Noraxon software, EMGs, and IMUs to collect human reference data for research study
- Created and tested Arduino circuits for real-time data transfer through WiFi using XBees and XCTU software

PROJECTS

Red Owl Book Organization Tool (R.O.B.O.T) Senior Design

August 2023 - Present

- Implemented computer vision using cameras, OpenCV and Tesseract libraries for Python, and a Jetson Nano to extract text from images
- Co-led team to develop Kotlin-based Android and web applications that connected to a Firebase database to check book statuses and locations
- Helped to design and write firmware for custom PCB using MSP430FR6989 to control LEDs and alarms and to support UART, JTAG, and Bluetooth protocols

Laser Tracking Micro Servos

Fall 2023

- Used OpenCV Python library to write a script to detect center of maximum motion
- Connected micro servos to Arduino with a laser attached that received x and y coordinates from the Python script and moved the servos accordingly
- The project pointed laser at moving objects within the frame of the camera

LEADERSHIP

Institute of Electrical and Electronics Engineers

Fall 2020 - Spring 2021

- Service Committee STEM Outreach: Designed a wooden wind turbine project modeled on Fusion360 that included a house with LED, wiring, and DC motor that powered the light when blown on; brought to approximately 70 students in Title I schools