JOSEPH A HODSON

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EDUCATION

University of Central Florida, Orlando, FL **GPA: 3.86/4.00** **August 2018 to December 2022**
Bachelor of Science in Electrical Engineering, Minor in Computer Science

- **Honors -** Bright Futures Florida Academic Scholar (100% tuition coverage), President's Honor Roll (Fall 2019, Spring 2020), College of Engineering Dean's List (Fall 2018, Spring 2019, Fall 2020)
- **Coursework -** Embedded Systems, Signals & Analysis, Electronics I, Circuits II, Digital Systems, Computer Organization, Semiconductor Devices, Computer Science I, Intro to C, Physics III
- **Extracurriculars -** IEEE (General Body Member)

EXPERIENCE

Lockheed Martin Space, Cape Canaveral, FL **May 2020 to August 2020**
Electrical Engineer Intern

- Mined 32 years of Trident II testing data to feed a machine learning model that predicts the most probable solution(s) to a test fault.
- Used Tableau to theorize and depict biases within my dataset in order to provide my team with advanced data analytics.
- Cross referenced Naval Acceptance Test Requirements to hardware failure reports in order to derive the root causes of out-of-specification hardware failures.

I-CON Systems, Oviedo, FL **January 2020 to March 2020**
Electrical Engineer Intern

- Helped conduct numerous, unique tests on active infrared sensors that are implemented throughout I-CON's major commercial product line.
- Used EAGLE to redesign existing PCBs. Microsoldered various failed components on prototype boards.

PROJECTS

Self-Sufficient Fish Tank, Orlando, FL **August 2020**

- Designed a small embedded system to control and simplify a fish tank's operations.
- An Arduino Nano based system that controlled peripherals including RGB LEDs, an air pump, a water pump, and an automatic fish feeder.

Personal Website, Clearwater, FL **December 2020 to January 2021**

- Developed a portfolio-like website in which is currently hosted on a Raspberry Pi on my local network. The backend utilizes Flask, a Python web framework.
- Front-end was written in HTML/CSS to render multiple pages, documenting past projects and personal hobbies.
- Automated the parsing of request logs via a cron job and a separate Python script to distinguish genuine requests from bots/malicious requests.

Electric Skateboard, Clearwater, FL **April 2019 to June 2019**

- Modded an existing skateboard into a remote-controlled electric skateboard using LiPo batteries, a wireless relay, and a high-torque fan motor.

Robotic Quadruped, Clearwater, FL **May 2019 to August 2019**

- Created an autonomous walking spider with four, 3-part moving limbs.
- Built using an Arduino Nano and twelve SG90 servo motors. Programmed spider using Arduino's IDE.

TECHNICAL SKILLS AND INTERESTS

Hardware	MCUs (ATmega328p, MSP430), FPGAs, Raspberry Pis, Microsoldering, Sensors, Motors, PCB/Circuit Design, Power Supplies
Software	C, Data Structures & Algorithms, Linux, Python, MIPS Assembly, Verilog, Bare Metal, HTML/CSS
Tools	Multisim, WSL, Tableau, Vivado, Flask, EAGLE, Excel, MARS, Blender
Interests	3D Printing, Spearfishing, Electronics Projects, Traveling