

Alex Perez

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OBJECTIVE

To attain a computer engineering internship where I can utilize my education as well as technical, communication, and leadership skills while gaining valuable work experience and completing challenging tasks in a fast-paced environment.

EDUCATION

Bachelor of Science in Computer Engineering

May 2023

University of Florida

Gainesville, FL

Overall GPA: 3.97

Relevant Coursework: Data Structures, Digital Logic, Microprocessor Applications, Circuits, Computer Communications

RESEARCH EXPERIENCE

Software Systems Lead for Autonomous Underwater Vehicle

Jan.2021 – Present

Machine Intelligence Lab at University of Florida

Gainesville, FL

- Lead the simulation design of the new generation autonomous submarine through tools like ROS, C++, and Python.
- Collaborate with electrical and mechanical members of the lab to debug submarine actuators and peripherals.
- Hold weekly office hours for approximately 50 active software members to visit and ask any task related questions.

Software Systems Lead for Autonomous Maritime Vehicle

Jan.2021 – Present

Machine Intelligence Lab at University of Florida

Gainesville, FL

- Updated the boat's Ubuntu operating system and any software required for the repository and actuators to function properly.
- Collaborated with electrical and mechanical members of the lab to debug the autonomous boat for lake testing.
- Conducted weekly meetings for design, debugging, and review of code related to simulations, missions, and computer vision.

Undergraduate Research Assistant for Autonomous IndyCar

Aug.2020 – Dec.2020

Machine Intelligence Lab at University of Florida

Gainesville, FL

- Led the simulation design of the IndyCar through tools like ROS, C++, and Python.
- Designed and implemented steering, braking, and throttle drivers for the lab's autonomous IndyCar.
- Collaborated with electrical and mechanical members for the integrated testing of the IndyCar drivers.

High School Molecular Biology Researcher/Mentee

Sept.2017 – Feb.2019

Bungert Lab at University of Florida Department of Biochemistry and Molecular Biology

Gainesville, FL

- Worked with graduate student to attempt to determine the structural and functional role of enhancer regions in the human genome.
- Worked with graduate student to better understand the relationship between two hemoglobin related regions in the human genome.
- Contributed to a larger study conducted by the lab titled "Identification of a Novel Enhancer/Chromatin Opening Element Associated with High-Level γ -Globin Gene Expression" which was published in the Journal of American Society for Microbiology.

PROJECTS

Biometric Door Lock Microcontroller Design

Jan.2020 – Feb.2020

Personal Project

Gainesville, FL

- Designed code for microcontroller and circuit to allow fingerprint and tactile switch I/O.
- Learned to interface with an Arduino Uno, implement types of transistors into circuit designs, and various tactile switch debouncing methods.

SKILLS

Software: C++, Python, ROS, Gazebo, MATLAB, Git, Linux, Java

Hardware: Oscilloscope, Soldering Iron, Arduino UNO, Raspberry Pi 4, Atmel microcontroller

Soft Skills: Bilingual (English and Spanish)

HONORS & AWARDS

- Dean's List (4 Semesters)
- Florida Bright Futures Scholarship
- High School Valedictorian
- National FFA Parliamentary Procedure Champion
- Associate of Arts Degree (Summa Cum Laude)
- International Science and Engineering Fair Participant