

# Roberto Antonio Hernandez

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## SUMMARY

A highly-motivated engineering student dedicated to learn about technologies that will improve the wellbeing of society. Currently finalizing sophomore undergraduate courses at Florida International University (FIU) while enrolled in the Electrical Engineering curriculum. Strong Leadership and integrity skills. Would like to join a Summer Internship program at a Technology leading company that would allow to contribute to the company while experience is gained.

## EDUCATION

FLORIDA INTERNATIONAL UNIVERSITY, MIAMI FL

*Bachelor of Science in Computer Engineering*

*August 2022*

GPA: 3.53/4.00

**Relevant Coursework:** Programming Embedded Systems, Computer Design, Logic Design ,Circuit Analysis, Programming I.

## PROJECTS

**FIU - IEEE Nasa Hybrid Rocket Project**

*August 2019 - May 2020*

- Developed a Hybrid Rocket with like minded engineers that delivered testing results of approximately 11,200 Feet in Altitude.
- Worked with team members on constructing a CAD Design of the Hybrid Rocket to comply with variables such as Impulse, Gravitational forces, and Thrust.
- Programmed a Perfectflite Altimeter to have a Fiberglass manufactured Rocket deploy a nose cone parachute under a 2k altitude displacement.

**FIU Energy, Power, and Sustainability Lab (Volunteer)**

*January 2020 - Present*

- Worked with a group of undergraduate research students on a wireless power transfer project using a vast amount of materials such as : LCC- Compensated Circuits, 1.5kW dynamic charging prototypes, capacitor banks, and transmitters.
- Volunteered alongside different Master and PhD Students to grasp a very good understanding of different sectors in the Power and Energy field such as Renewable and Thermal Energy Systems.
- Worked on an MPPT Solar Project (Maximum Power Point Tracking) to maximize power extraction on Photovoltaic Solar Systems.
- Finalizing the admission process to be fully incorporated as an Undergraduate Researcher for the Laboratory.

**Florida International University- EGN 1002 Robotic Project; Leader**

*August 2018 - November 2018*

- Placed Second in the FIU Robotic Competition, hosted by IEEE.
- Designed a Robot (mBot) to accurately read and move different color blocks to its correct location using a variety of sensors and computer vision modules.( 2<sup>nd</sup> Place).

**NSF REU Research Program: Smart Grid Energy Systems, Miami , FL**

*July 2020 - Present*

- Worked with research professionals on finding the future results of the complex algorithm the Model Predictive Control to find the future effects it would have on Automobiles and AC systems.
- Programmed different scripts using MATLAB and Python to accurately read future results using a multivariable control algorithm that displayed the optimization cost over a future time horizon.

## CLUBS/INVOLVEMENTS

**FIU - IEEE Executive Board Member (President) Miami , FL**

*January 2020- Present*

- Worked to bring different workshops and activities every week to the Student Branch such as Programming Workshops, Company Seminar's and Graduate Presentations.
- Directed two core projects both in the Robotics and Rocketry Field (NASA Hybrid Rocket Competition and Southeast Con)

- Coordinated weekly meetings with different student organizations to bring a variety of STEM activities to the Engineering Community at FIU.

### **SKILLS**

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**Technical:** Python, RTOS, C/C++, EagleCad, Microsoft Office: Word, Excel, PowerPoint, Outlook

**Languages:** English/ Spanish