Victor Lopez

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Education

Master of Science in Systems Engineering and Management — Expected Dec 2024
University of Texas at Dallas
GPA: 3.33/4.0

Bachelor of Science in Electrical Engineering — May 2019 – Aug 2023
University of Texas at Dallas
GPA: 3.62/4.0

Skills

- Software: C, C++, Python, JavaScript, React, Git, GitHub, HTML5, CSS, Bootstrap, Linux, Bash, PSpice, OrCAD, Spotfire, MATLAB, Simulink

Experience

Texas Instruments
Product Marketing Engineer Intern — May 2022 – Aug 2023

- Compiled **Python** scripts which automatically called **C/C++** files to test transceiver bandwidths.
- Redesigned Wireless Infrastructure's webpage to make product information and specifications more accessible to prospective clients.
- Wrote two white papers detailing bandwidth results based on 50+ transceiver configurations.
- Presented product documentation to field engineers using email templates, increasing customer acquisition by 10%.

IEEE at The University of Texas at Dallas
Director of Technology, Software Developer — Jan 2021 – Aug 2023

- Directed embedded systems projects for 200+ students, introducing them to real life applications of EE concepts.
- Integrated hardware with analog-to-digital conversion and sensor data processing software for 10+ microcontroller projects using **C++**.
- Developed logic to analyze correct/incorrect user inputs, providing visual feedback mechanisms to indicate game status and progression.
- Utilized serial communication for real-time monitoring and debugging, expediting software development time.

Projects

Data Analysis on Rental Properties

- Extracted and analyzed market share, average revenue, and property ratings from dat and CSV files.
- Transformed original data into custom objects for handling data cleaning processes and filling in missing values using statistical calculations.
- Loaded manipulated data into data frame for more efficient and accurate processing.
- Presented insights with data-driven visualizations on rental property performance and market trends.

Embedded Systems Simon Says

- Created interactive Simon Says game using an Arduino microcontroller, prioritizing user friendliness with LEDs and buttons.
- Developed code to generate and display random LED sequences, progressively increasing the difficulty to enhance gameplay.
- Improved system robustness by implementing delays and conditional logic to handle continuous game cycles and user interactions.

Sitara Integrated Motor Boosterpack Assignment

- Designed a high-precision configurable motor control for a weighted robotic arm using different positional feedback sensors.
- Programmed analog to digital conversion, enhanced pulse width modulation, and input/output peripherals using Texas Instruments' SDK.
- Integrated DRV8323RH Boosterpack with Sitara AM263x LaunchPad microcontroller for brushless DC motor control.