

YARIEL MERCADO

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EDUCATION

University of Puerto Rico at Mayagüez

BS Software Engineering *GPA: 3.71*

Mayagüez, Puerto Rico

Expected Graduation Date: May 2024

Relevant Coursework: Object Oriented Programming, Data Structures & Algorithms, Intro to Software Engineering and Development (Ongoing)

TECHNICAL SKILLS

Languages: Python, Java, C++
Software Tools: HTML, CSS, Bootstrap
Other Tools: Git, LaTeX, CMake

WORK EXPERIENCE

Google

Remote

Tech Exchange Scholar

January 2022 - May 2022

- Launched a full stack business website utilizing **MongoDB** as a backend database and **Flask**.
- Excelled in classes while interviewing with various Google Engineers and deepened my knowledge in the applied data structures and software development courses.
- Gained critical industry knowledge and experience under the mentorship of Google engineers.

VIS Technologies

Dorado, Puerto Rico

Shipping Handler

October 2018 - August 2021

- Placed in charge of shipping PLC equipment to other engineering companies, increasing shipping speeds by 10%.
- Checked the part numbers for each item to ensure that the boxes being sent contained the correct equipment.
- If any packages were incomplete, ordered the corresponding replacements with the part numbers and scheduled them as the next packages sent out.

VIS Technologies

Toa Baja, Puerto Rico

PLC Systems Programmer

December 2019 - January 2020

- Collaborated with electrical engineers to program a bread proofer, PLC interface for Holsum's bread assembly line.
- Utilized bit addressing to map each function on the bread proofing screen to the PLC.
- Designed the buttons and the various screen tabs displayed which made bread proofing 50% faster.

TECHNICAL PROJECTS

Embedded Systems Elevator Project

July 2021-December 2021

- Utilizing two Arduinos serially connected to a laptop, hosted a virtual elevator management system written in **C++**. Controlled via a **Python** GUI on a laptop. Utilized COBS encoding and UART standards to communicate between devices. Developed with members of RUMarino's embedded division.

Sudoku GUI/Backtracking Algorithm Visualizer

July 2021

- Developed an interactive Sudoku GUI, implemented with the **Pygame** library, which allows users to not only play the game, but visualize how the backtracking algorithm solves the randomly generated Sudoku grid.

Discord Bot

May 2021

- Deployed a discord bot, which communicates with the server via the **discord.py** library, which supports a variety of multimedia commands such as: web scraping, detailed statistical information on COVID-19, and more. Hosted on a Raspberry Pi 3.

ASSOCIATIONS

Computer Alliance of Hispanic Serving Institutions (CAHSI)

August 2021-Present

- Student association network focused on problem solving via coding, as well as professional development and networking.

RUMarino- Autonomous Water Vehicle Club

July 2021-Present

- Alongside the leads of the embedded division at the RUMarino student club, coding the vehicle prototype while giving mentorship to the club's first years. Compete yearly at RoboSub.