Emmanuel Rodriguez

830-321-1348 | emmanuel.rodriguez52303@gmail.com | San Antonio, TX 78228
https://www.linkedin.com/in/emmanuel-rodriguez-04a123221/

I am a Driven senior Computer Engineering student proficient in C/C++, Python, Linux, and Microsoft technologies, with strong foundations in object-oriented design, data structures, algorithms, and operating systems. Passionate about leveraging machine learning and AI to create impactful solutions that improve communities. Seeking a role in software development or AI research to apply technical expertise and contribute to innovative, socially beneficial projects.

EDUCATION

St. Mary's University | San Antonio, TX   Graduated: May 17, 2025
Bachelor of Science, Computer Engineering
GPA 3.51

- Relevant Coursework: C Programming, Object Oriented Program and Design in C++, Computer Organization and Architecture, Data Structures and Algorithms, Operating Systems, Software Engineering, Computer Networks
- Derma-light: I am building a device that can capture high-quality images of the skin, and I am developing an app that can take those images and analyze them for potential skin cancer. The app will also send the images to a local or partnering clinic for a doctor to analyze.

PROJECTS

Drone Car

- Created a program in C to control a drone car using the keyboard
- Created a function to set a path for the drone car to run autonomously.
- Connected to the car drone with a raspberry Pi keyboard with remote access through VNC viewer
- Added a curve feature because the drone would not drive perfectly straight.
- Successfully completed the track race, controlled and automated, placed 2nd overall in the class based on time.

Camera Tracking System

- Designed a program in C++ using a camera tracking system that receives data and determines how many objects are in the camera's view.
- Calculates velocity and angle for each object in the camera tracking system's vicinity.
- Able to store and calculate information for any object in the camera's view.
- Did not fully complete the project, missed the testing phase.

Seven Segment Indicator

- Fashioned a system using logic chips that translates 4-bit binary into their corresponding decimal number on a seven-segment digital indicator.
- Used multi-Sim to build and test the circuit, then built the circuit on a breadboard.
- Worked with switches to signify the bits and had no issues.

SKILLS

Technical /Computer Skills: C/C++, Python, Swift, Assembly (RISC-V), Microsoft Office, SolidWorks, GitHub
Other: Leadership, Communication/Teamwork, Fluent in Spanish, Adaptability, Strong Work Ethic, Critical Thinking.

EXPERIENCE

SAMSAT R&D Intern | San Antonio, TX   January 2025 – May 2025
Intern

- Worked on an exhibit at SAMSAT Area 21 called Cyber City, a Lego city utilizing raspberry Pi's and OpenPLC to emulate a city grid.
- The Exhibit was no longer functional and my team brought it back to functionality, and we will add more raspberry Pi's to improve functionality.

Northern Tool and Equipment | San Antonio, Tx   August 2023 – June 2024
Cashier

- Attend to customers and answer phone calls while attending the front.
- Handle finances including cash during checkouts and counting money after closing.

RDZ Quality Homes and Construction | San Antonio, Tx   May 2023 – August 2023
Laborer
- Manage tools and company equipment in an efficient and timely manner.
- Assist contractors, electricians, and painters in routine home construction.

Walmart | Floresville, Tx   June 2021 – August 2022
Food and Consumables Associate
- Assist patrons by answering questions regarding store merchandise and directing them according to their needs.
- Inventory stock and requisition new inventory to perform sales floor work.

LEADERSHIP & COMMUNITY INVOLVEMENT

Mariachi Cascabel | San Antonio, Tx   September 2022 – Present
Treasurer and Risk-Management Officer, Date – Present
Performer, September 2022 – Present
- Supervise and delegate club finances, including managing the club funds and creating plans for budgeting.
- Play guitar and sing as the lead of the group during distinguished performances for faculty and staff.

IEEE Student Organization | San Antonio, Tx   January 2024 – Present
Member
- Compete in Capture The Flag competitions with categories in Cryptography, Reverse Engineering, and more.
- Placed 4th at the IEEE Region 5 Greentech Cyber Challenge.

A.C.T.S | Floresville, Tx   February 2022 – July 2022
Director
- Prepare, plan, and execute a weekend long retreat for the teens in the Catholic community.
- Coordinate with co-director, adult leads, and church ministry on retreat scheduling and finances.
- Lead regular meetings with the retreat team and staff.