

Carlos D. Guerrero

National City, CA | (619) 455-9177 | c5guerrero@ucsd.edu | [LinkedIn](#) | [Portfolio](#)

EDUCATION

University of California: San Diego

Bachelor's of Science, Electrical Engineering, Senior

La Jolla, San Diego, CA

Expected June 2027

Cumulative GPA: 3.05

Relevant Coursework:

ECE 15 - C/C++ | ECE 25 - Digital Design | ECE 35 - Circuit Analysis | ECE 140 - Product Design and Full-Stack Development

PROJECTS

MedHome: Home Health Monitoring System

April - June 2025

- Developed MedHome, an end-to-end IoT system for remote health monitoring using ESP32 and FastAPI. Utilized Git/GitHub in agile team workflows.
- Built real-time vitals dashboard with Docker deployment on Render; implemented automated alerts and REST APIs to display and structure data (Heart Rate, Blood Pressure, O₂, Weight) for customers to view and provide to their physician..
- Achieved 80%+ efficiency and measured 30+ patients in a test trial.
- [GitHub Repository](#) | [MedHome Site](#)

Line Following Robot

October - December 2024

- Developed an autonomous line-following robot using Arduino, incorporating a PID controller for accurate navigation along black lines on white surfaces. Fine-tuned PID parameters to improve response time and ensure smoother turns, optimizing overall performance.

EXPERIENCE

University of California: San Diego, Transportation Services

September 2024 - Present

Customer Relations Representative

- Serving as a front-line representative for a university department generating \$250,000+ in monthly revenue, handling inquiries on shuttle services, parking permits, and alternative transportation. Provided schedule and route information, resolved concerns, and promoted sustainable options with exceptional customer service. Resolved 1,100+ Faculty and Student cases.

Vallarta's Supermarkets

June - September 2023

Part-time Cashier

- Assisted managers with store opening and closing procedures, which helped me develop strong customer service, teamwork, and communication skills. Gained valuable experience in money-handling protocols, further enhancing my ability to contribute effectively in a retail environment.

SKILLS & INTERESTS

- **Technical Skills:** Circuit/PCB design, digital design, soldering, 3D printer, oscilloscope, DC power supply, function generator, C/C++, Python, HTML, CSS, JavaScript, SQL, Verilog, MIPS, MATLAB, Microsoft Office
- **General Skills:** Teamwork, communication, dedication, detail-oriented, 3-yrs driving license
- **Languages:** English, Spanish
- **Interests:** Web & backend development, electricity/electronics, driving/racing, video games