Carlos D. Martinez

Computer Scientist B.S.

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PROFESSIONAL SUMMARY

Computer Science graduate with hands-on experience debugging, designing and optimizing software. Strong foundation in C++ scripting, Linux-based systems, documentation and PCBs. Educational background in Electronics Engineering and with practical experience creating sensor-driven systems and integrated microcontrollers. Comfortable soldering, working in large and small teams, leading projects and troubleshooting.

EDUCATION

San Diego State University, San Diego, CA

B.S. in Computer Science | May 2025

Relevant Coursework: Artificial Intelligence, Robotics, Operating Systems, Systems Administration, Database Theory & Implementation, Software Engineering

Universidad Autónoma de Baja California (UABC), Mexicali, Mexico

Electronics Engineering (5 semesters completed) | 2018-2020

Relevant Coursework: Analog Circuits I & II, Electricity & Magnetism, Multivariable Calculus, Dynamics & Statics, Thermodynamics, Acoustics, Modern Physics

CBTIS 21, Mexicali, Mexico

Associate's Degree in Electronics | May 2016

Relevant Coursework: Microcontroller Applications for Smart Buildings, PLC Programming, Digital Design, Analog Circuits, Radiofrequency

WORK EXPERIENCE

Case Manager

Self-Determined Futures LLC, San Diego, CA | May 2025 - Present

- Maintained precise, audit-ready documentation across multiple concurrent cases.
- Reviewed data for accuracy, consistency, and readiness prior to reporting.
- Prioritized tasks based on urgency, constraints, and risk, ensuring timely delivery.
- Communicated status updates clearly to team, family members and supervisor.

System Administration Intern

San Diego State University, San Diego, CA | Feb 2025 - May 2025

- Installed, configured, and supported Linux-based systems including DNS, web, mail, and authentication services.
- Troubleshooting Linux operating system and networking issues (IP configuration, DNS resolution, service availability).
- Deployed and validated redundant services using Kubernetes.

- Automated configuration and deployment tasks using Ansible and Python-based scripts.
- Documented system configurations, procedures, and validation results.

STEM Instructor
Nexplore, San Diego, CA | Sep 2020 - Aug 2025
- Explained technical concepts related to programming, robotics, and electronics to diverse audiences.
- Supported hands-on builds and troubleshooting activities.
- Created reusable instructional and technical documentation.

PROJECTS

Autonomous Mobile Robot - Sensor & Control System
- Developed software to control a mobile robot using multiple sensors (distance, proximity, motion).
- Built and validated hardware-software through iterative testing.
- Debugged system behavior by analyzing sensor data and control logic.

Smart Home Automation System - Microcontroller - Based Control
- Built an automated home control system using a PIC microcontroller and multiple custom circuits.
- Integrated sensors (presence, temperature, and day/night detection) to control lighting and A/C
- Designed and tested circuit modules including a smart key entry system and automated sink control.
- Validated system behavior through iterative testing and documented wiring and configuration details.

Radio Transmitter & Receiver - Solded Prototype
- Designed and assembled a radio transmitter/receiver prototype using analog components on a breadboard and solder to a plaque.
- Tested signal behavior and adjusted component values (capacitors, inductors, potentiometers) to improve performance.
- Used multimeters and spectrum analyzers to measure signals, and support troubleshooting.

Technical Skills Demand Forecasting
- Implemented Data engineering techniques to clean datasets.
- Validated data completeness and consistency prior to analysis.
- Predicted outcomes using different AI models.

TECHNICAL SKILLS
Programming: Python, SQL, C++, Java
Operating Systems: Linux, Windows
Hardware & Embedded: Soldering, Sensors, microcontrollers, PLCs, multimeters,
Tools: Git, Ansible, Kubernetes, Microsoft office, Azure, VMware, Visual Studio IDE