Michelle Herrera-Cuen

Computer Engineer | Embedded Systems | Microcontrollers | Programming | Robotics

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Familiar with: C, C++, Python, Java, HTML, CSS, JavaScript, Linux, Verilog, Blender, Roblox Studio, React.js, Git

Experience

Cashier
Jack in the Box
Torrance, CA | June 2022-current

- Delivering outstanding customer service through speedy and accurate decisions
- Maintaining high-quality standards throughout the workplace environment

Robotic Fish Research Project for PACK LAB
CSULB Research Assitant
Long Beach, CA | Jan 2025 - current

- Modeling a bio-inspired robotic fish system, analyzing body curvature, tail-beat frequencies, and hydrodynamic forces for efficient underwater propulsion.
- Building simulation environments for aquatic robot behavior, tuning parameters such as stiffness, damping, and motor inputs.

Projects

Game Development

- Developed several games and gained proficient skills in programming languages such as Lua, React, Python, and C(GTK). *Currently developing several web games with React.js and Blender*
- Developed a Space Invaders–style embedded game on LaunchPad using C, integrating Nokia 5110 LCD, ADC-based potentiometer input, GPIO interrupts for controls, and PWM-driven DAC audio; implemented modular real-time firmware with bitmap graphics, collision detection, and interrupt-based timing.

Robotics

- Follower Robot: Designed and programmed an autonomous robot car with dual object-following and wall-following modes using IR sensors, DC motors, and a LaunchPad; implemented GPIO, ADC, PWM, and interrupt-driven control for real-time sensor-based navigation.
- *Currently developing embedded systems Bluetooth robot car with 3 modes: manual, automatic, and voice using UART, 12C, SPI, and motor control*

Associations

Society of Automotive Engineers

Data Acquisition Team Lead | Sept 2024-May 2025

- Paired programming of ESP32 microcontroller to send and collect data from height and temperature sensors using C language. Utilized Raspberry Pi computer receiving data from ESP32 via a LoRa module

Institute of Electrical and Electronics Engineers

Board Member | Feb 2024-current

- PCB design and Altium Designer

Women in Computing

President | Aug 2025-current

- 2025 Hackathon: developed and built an app to teach marine facts using Python language

Education

Bachelor's of Science in Computer Engineering

California State University, Long Beach | 2023-expected 2027