# 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*

## 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

## 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*
- Utilized Blender for the graphical aspect of UI and Unity/Roblox Studio for development
- 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.
- *Currently working on utilizing HTML and CSS to create my own website portfolio with sound effects and creative graphic design*

**Robotics**

- VEX 687 Robot: Managed team to program robotic arm in maximally elevating robot from ground in Robotics competition within 3 months. Utilize Arduino and Mechanical concepts.
- Line-Following Robot: Built an analog line-following robot using photodiode sensors, op-amp comparators, and an H-Bridge motor driver; applied circuit design, feedback control, and power management principles to achieve autonomous navigation without microcontrollers.
- 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*

## 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 to help with the behind-the-scenes logistics

## Education

**Bachelor's of Science in Computer Engineering**
California State University, Long Beach | 2023-expected 2027