Jeremiah Herrera
Robotics Engineer (Electrical)

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OBJECTIVE:

Innovative and driven engineering graduate seeking a role in robotics, embedded systems, or UAV development where I can apply my experience in electrical design, automation, and prototype testing. I am eager to contribute to new and advance technology projects and collaborate in a multidisciplinary team to drive solutions from concept to deployment.

SKILLS:

- Embedded Systems (STM32, ESP32, PSOC, MPLAB, CircuitPython)
- Rapid Prototyping (3D printing, CNC, Soldering)
- Industrial Automation & multi axis Robot Setup

- PCB Design (Altium, Eagle, Kicad, Cadence)
- Drone Development (Custom UAS, Custom Flight controller)
- Programming (C++, python, html)

WORK EXPERIENCE:

Robot Technician   *August 2023- present*

Pilgrim Aerospace Fasteners

- Setup collaborative robots (cobots) alongside CNC machines to automate manufacturing tasks.
- Evaluated part handling automation feasibility and provided feedback on tooling and fixture design.
- Assisted in CNC programming and editing G-code for milling and turning operations.
- Worked along automation engineers to design and setup automation processes.

Robot Technician   *Sept. 2019 - Nov. 2021*

Starship Technologies

- Operated and Monitored autonomous delivery robots in real time and responded to alerts.
- Performed field repairs: Motor swaps, sensor replacements, and firmware updates.
- Supported visual training data collection by capturing and labeling footage to improve operations.
- Contributed to on site training enhancing the robots abilities to operate.

EDUCATION:

Bachelor's Degree Robotics Engineering (Electrical)   *August 2019 - May 2025*
Arizona State University

PROJECTS:

Low Swap-C Drone Flight Controller: Led design and prototyping of a low cost custom built flight controller, using STM MCU. Integrated Industry partners IMU with the flight controller.

Real time Drone Vision System (Python/ R. PI): Built and deployed a YOLOv5 based object detection. Optimized frame processing using tiny YOLO. Implemented auto capture with labeling and scoring.

SMT Soldering & PCB Assembly: Assembled and tested custom PCBs using hot air and reflow techniques. Fine pitch components including 64-pin STM32 and other surface mount components.

IoT Weather Station (ESP32/ Embedded Design): Helped design and build a weather station using an esp32 and MPLAB for wireless data logging. Integrated barometer, and motor controller for solar panel positioning.