NAZARIO SALDAÑA

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EDUCATION

The University of Texas at Austin – Austin, TX **May 2028**

Bachelor of Science in Electrical & Computer Engineering | *GPA: 3.21*

Relevant Coursework: Computer Architecture, Embedded Systems, Digital Logic Design, Circuit Theory, Algorithms

PROJECTS

Wearable Fitness Tracker | *C, PCB Design, Nordic nRF52840* **September 2026 – Present**

- Designed custom 2-layer wearable PCB integrating heart-rate, SpO2, skin-temperature, and fuel-gauge ICs
- Engineered low-power design with gated sensor rail, wake-on-magnet, and 10 µA deep-sleep current
- Developing firmware and native Swift iOS app to stream live data using standard BLE heart-rate and battery profiles

ASCEND Texas ATV | *Python, Raspberry Pi* **September 2025 – Present**

- Developed Python firmware on a Raspberry Pi for synchronized dual ORCA linear actuator control, preventing hardware damage via custom system calibration
- Interfacing 4 strain gauges via ADC to capture precise readings for dynamic, closed-loop actuator adjustments
- Designed a 60A fused main power disconnect to isolate battery connections from the actuator system, mitigating short circuits and connection arcing that could damage the linear actuators

LC-3b Microarchitecture Simulator | *Course Project* | *C, Computer Architecture* **August 2026 – Present**

- Developed a 2-pass assembler to translate LC-3b assembly language source code into machine language
- Designed an instruction-level simulator to model the LC-3b microarchitecture and execute the assembled machine code
- Engineered a microarchitecture-level simulator by developing custom microcode to execute each LC-3b instruction

Space Invaders Game | *Course Project* | *C, TI MSPM0* **November 2025**

- Built a Space Invaders game in C using interrupt system logic for real-time input, custom graphics, and audio integration
- Designed modular firmware including collision detection, event timing, and real-time player score system
- Implemented interactive spaceship movement on a 128x160 LCD screen using a slide potentiometer as an analog input

LEADERSHIP & COMMUNITY INVOLVEMENT

Society of Hispanic Professional Engineers – Austin, TX **May 2026 – Present**

Project Development Chair

- Organized 9+ technical events and hosted 5+ industry panels to expand cross-disciplinary networking, and lead preparation of 50+ members for the SHPE National Convention
- Collaborated with corporate sponsors to coordinate 3+ events, including an annual Microsoft Makeathon initiative

Recruitment & Retention Co-Chair **May 2025 – May 2026**

- Boosted membership by 25% through strategic outreach and by organizing 15+ interactive social events
- Directed Manitos & Manitas mentorship program and managed game logistics for 100+ members, increasing new member activity by 50% YoY

Ramshorn Scholars Program – Austin, TX **August 2025 – Present**

Academic Coach

- Mentored 8 first-year Ramshorn Scholars, supporting academic, social, and personal transition into college
- Guided student success by providing subject tutoring, resume reviews, and networking opportunities
- Led 4 exam review sessions for electrical and computer engineering courses, raising mentees' exam averages by ~10%

Dell Technologies STEM Aspire Program **August 2026 – Present**

Participant

- Selected as 1 of 38 students to participate in STEM Aspire, to accelerate career readiness and professional growth
- Engaged in 1:1 mentorship and career coaching with corporate leaders to navigate professional pathways
- Strengthened technical and professional competencies via industry workshops, networking, and site visits

TECHNICAL SKILLS

- **Languages:** C/C++, ARM Assembly, Verilog, Python, Java, Swift
- **Software:** VSCode, Xilinx Vivado, KiCad, LTspice, MATLAB
- **Technologies:** Oscilloscope, Logic Analyzer, Soldering, FPGA, UART, SPI, I2C, BLE
- **Platforms:** TI MSPM0, Nordic nRF52840, Raspberry Pi, Arduino

HONORS

Ramshorn Scholar | HSF Scholar | University Leadership Network Scholar | Cockrell Engineering Scholarship Recipient