

Felipe Miranda

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OBJECTIVE

Curious Electrical Engineering junior who enjoys finding and improving weak points in everyday systems, seeking a Summer 2027 internship in instrumentation, controls, or embedded systems.

EDUCATION

B.S. Electrical Engineering

Jan 2026 – May 2028 (Expected)

University of Houston, Cullen College of Engineering

- GPA: 3.55
- Relevant Coursework: Circuit Analysis I & II + Lab, Programming Applications in ECE; in progress Fall 2026: Electronics + Lab, Signals & Systems Analysis, Digital Logic Design

A.S. Engineering

2023 – 2025

San Jacinto College

- GPA: 3.41 · Dean's Honor List · Promise Scholarship
- Oral & poster presenter, "Volume Project & Research," Honors Showcase, April 2024

Visiting Undergraduate Student

Summer 2025

Rice University

- COMP 140: Computational Thinking (Python, algorithmic problem solving)

PERSONAL PROJECTS

STM32 FreeRTOS Environmental Monitor

Summer 2026

C · FreeRTOS · ARM Cortex-M4 · I2C · UART · Bare-metal toolchain

- Wrote the BMP280 and SSD1306 drivers from scratch off the manufacturer datasheets, without vendor HAL libraries, on a NUCLEO-F446RE
- Moved the firmware onto FreeRTOS with separate sensor, display, and UART tasks, using an I2C mutex to keep them from colliding on the bus and a queue to pass readings between them
- Added an EXTI hardware interrupt for non-blocking unit switching; verified bus timing on a logic analyzer

SimUaid Modernization

Summer 2026 – Present

Digital logic simulation engine · Electron · React · TypeScript

- Rebuilt a dated Windows logic simulator used in UH Digital Logic Design coursework: schematic editor and gate-level simulation engine in Electron, React, and TypeScript

FinnaCalc Personal Finance Platform

Summer 2025 – Present

SwiftUI (iOS) · Next.js · Supabase · Plaid

- Lead developer on a two-person team, handling repository access, coordinating concurrent work, and running release prep
- Built the native iOS app with a home-screen widget extension, and wired up Plaid and SnapTrade for account linking

EXPERIENCE

Cashier / Bagger, H-E-B, Houston, TX

Aug 2022 – Feb 2025

- Worked 2.5 years through high school and college while carrying a full course load; handled checkout, cash accountability, and customer service in a high-volume store

TECHNICAL SKILLS

Embedded: C, STM32 (Cortex-M4), FreeRTOS, I2C, SPI, UART, GPIO interrupts, ARM GCC, CMake, OpenOCD

Hardware & Lab: Breadboard prototyping, soldering, logic analyzer, multimeter, writing drivers from datasheets

Languages: C, Python, Swift, JavaScript/TypeScript, SQL, Bash

Software & Tools: Git/GitHub, Linux (Ubuntu), WSL2, VS Code, AutoCAD, FreeCAD, REST APIs, SwiftUI, React/Next.js

Languages (Spoken): English, Spanish

ACTIVITIES & INTERESTS

Affiliations: Society of Hispanic Professional Engineers (SHPE), UH chapter

Interests: Hands-on automotive maintenance: brakes, suspension, and wheel fitment on five personal vehicles