Cristian Salitre

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Experience

Honeywell Charlotte, NC
Advanced Application Engineer *September 2025 – Present*

- Serve as a primary point of contact for firmware integration, supporting customers across all stages of the integration process under defined project scope.
- Represent firmware and hardware considerations in customer meetings and internal discussions, collaborating with Solution Architects and core engineering to align technical solutions with customer needs.
- Develop customer-facing demos (UI-driven and ML-based) used in customer engagements and trade shows (e.g., NRF).

Honeywell Charlotte, NC
Software Engineer Intern *June 2025 – August 2025*

- Integrated Allied Vision smart camera with vision software using the Vimba X SDK; experimented with vision-language models (VLMs) like Ollama.
- Evaluated NXP i.MX93 SoC for customer platform integration; analyzing Zephyr RTOS for potential adoption.

Oxit Charlotte, NC
Embedded Engineer Intern *March 2025 – June 2025*

- Implemented visual dashboard on ESP32-S2/S3 Feather TFT for LoRaWAN/Sidewalk dual-connectivity application, displaying real-time connection status, protocol modes (BLE/FSK/CSS), signal measurements (RSSI/SNR), and sensor data to replace serial monitor dependency.

Skills

Protocols	I2C, UART, SWD, MIPI-CSI, USB
Platforms	ARM Cortex-A55/M0, Ti-MSP430, ESP32, Qualcomm/MTK
Languages	C/C++, Python, MATLAB
Tools	Git
Embedded OS	Zephyr, RT-Thread, Linux, Android
ML	ML-based demos, computer vision inference, VLM evaluation

Projects

Asset Tracking and Anti-theft System — Capstone

- Developed interrupt-driven firmware-based application for the ESP32-S3 implementing BLE communication for wireless control. Built a simple flutter mobile application that communicates with the device as part of the PoC.
- Co-designed 2-layer PCB in Altium Designer that met cost and size constraints. Delivered PoC to industry sponsor following a year-long development cycle.

Predicting Future Returns of the S&P 500 – ML Final Project

- Used 25 years of Federal Reserve data to predict monthly market direction using machine learning.
- Performed data preprocessing and feature engineering, including cyclicity transformations.
- Compared neural network models with classical PCA and SVC; simpler models outperformed complex ones.

Education

North Carolina State University Raleigh, NC
Master of Science in Electrical Engineering *Expected – May 2028*

University of North Carolina at Charlotte Charlotte, NC
Bachelor of Science in Computer Engineering – ML Concentration *December 2024*