

Cristian Ruvalcaba

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WORK EXPERIENCE

PepsiCo

June 2022 – July 2022

Summer Intern

Plano, TX

- Delivered executive presentations summarizing key results and market trends to leadership.
- Facilitated daily cross-functional team meetings ensuring alignment with agile project goals.
- Assisted peers to achieve critical project milestones.

Undergraduate Research

ECS RIDE UAV Tracking and Communication

2026 – Present

C/C++, Python, STM32, ST-Link, RF Switch Control

- Programmed embedded C/C++ firmware for STM32 hardware, executing logic state routing control.
- Built a Python control utility interfacing an external host machine with ST-Link debuggers to automate switch-state sequencing and trigger live RF path shifts.
- Evaluated RF switch S-parameter measurements using Vector Network Analyzers.

TECHNICAL PROJECTS

Syllabuddy (Syllabus Extraction Tool)

2025 – 2026

Go, Python, Gemini API, GCP, PyMuPDF

- Engineered a PDF syllabus parser to automate calendar scheduling by extracting structured date/time entities.
- Designed an extraction pipeline using Python/PyMuPDF and deployed on GCP(Google Cloud Platform).

Homelab Server Architecture

2023 – Present

Ubuntu Server, Docker, CasaOS

- Architected and maintained a personal server running Ubuntu.
- Containerized services via Docker (Nextcloud, Frigate, Immich, Grafana).
- Configured local camera streams and database instances (PostgreSQL, SQLite) with performance dashboards.

Hydromeda (Subaquatic ROV)

2023 – 2024

ROS2, Docker

- Assisted in ROS2-based subaquatic ROV development and managed Docker containers.

EDUCATION

The University of Texas at Dallas

2023 - May 2027

Bachelor of Science | Computer Science

Cumulative GPA: 3.5/4.0

- Honors: Texas Leadership Scholars, First-Generation Student, Dean's List 2024.
- Study Abroad: Athens, Greece (Summer 2026).

Dallas College

2019 - 2023

Associate of Applied Science | Software Developer

Dallas, TX

- Cumulative GPA: 3.8/4.0.
- Completed degree concurrently with high school diploma through the P-TECH (Pathways in Technology) early college program.

SKILLS

Languages: Python, Go, C++, Java, JavaScript, C, C#, Kotlin, Scheme, Prolog

Web/Tools: FastAPI, React, Next.js, Flask, Tailwind CSS, Linux/Ubuntu, Docker, ROS2, GCP, Git, PostgreSQL, SQLite, STM32, Raspberry Pi Pico

Bilingual: English and Spanish