

Adan Rojas

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EDUCATION

University of Central Florida

Bachelor of Science in Computer Science, Minor in Computer Engineering

Orlando, FL

Aug 2023 - Dec 2027

EXPERIENCE

Undergraduate Research Assistant

Jul 2026 - Present

UCF Institute of Artificial Intelligence

Orlando, FL

- Submitted a proposal for a memory-augmented approach to **agentic MLLM** long-video understanding research.
- Designed a lightweight memory pipeline with a **knowledge graph** for zero-shot baseline evaluation experiments.

Software Engineer Intern

May 2026 - Jul 2026

Publix Super Markets

Lakeland, FL

- Modernized **2** warehouse batch jobs from **VB6** to **C#/.NET**, improving maintainability for **3 million** customers.
- Collaborated with **18** engineers to develop a Learning Management System supporting **245,000** store employees.
- Designed a **5-agent AI** system using **Model Context Protocol (MCP)** to retrieve development documentation.
- Deployed a regression testing AI agent with **Playwright** and **Azure CI/CD**, cutting manual QA effort by **95%**.
- Crafted agent skills for **3,000 engineers**, outperforming a baseline across **4 benchmarks** by **71%** in output cost.

Student Builder Campus Leader

Jan 2026 - May 2026

AWS (Amazon Web Services)

Orlando, FL

- Hosted **5** technical workshops and events on **AWS services** such as **S3, DynamoDB, Lambda, Bedrock, IAM**.
- Drove **100+** AWS Builder Center sign-ups, increasing student AWS platform engagement by **20%** on Campus.
- Increased AWS Builder Center awareness among **200** students through **3** class announcements and **2** RSO events.

Hackathon Organizer

Jan 2026 - May 2026

Knight Hacks

Orlando, FL

- Executed a **1,000+**-participant, **36-hour** hackathon, coordinating cross-functional teams and sponsor logistics.
- Coordinated **20+ sponsors** and **1,000+ hackers**, resolving and aligning issues in a fast-paced environment.
- Delivered technical workshops, events, and polls, increasing engagement across diverse student skill levels at UCF.
- Helped secure a **\$3,000** sponsorship through strategic partner relationships, increasing hackathon budget by **5%**.

PROJECTS

Assistant | Python, AWS CDK, Lambda, S3, DynamoDB, Bedrock, EventBridge, IAM, HTTP API

Jul 2026

- Engineered a **Python** scheduling agent with **Lambda** and **Bedrock**, allocating **4** daily blocks via a **cron job**.
- Developed an **API Gateway + DynamoDB** gym logger, increasing workout attendance by **20%** over **3 weeks**.
- Designed an ML pipeline with **S3** and **Lambda** to normalize gym logs for **logistic regression** attended prediction.

iPalo | Swift, C++, Python, ARKit, ElevenLabs API, ESP32 Microcontroller, LRAs, 3D Print, CAD

Oct 2025

- Won **1st of 22 teams** for Best Use of ElevenLabs by building a **LiDAR-powered** device with haptic feedback.
- Shipped an iOS app with **Swift** and **Python**, generating audio descriptions in **5 sec** via **Gemini** and **ElevenLabs**.
- Prototyped a **LiDAR** haptic navigation system with **LRAs**, one **ESP32**, and the iPhone for directional feedback.
- Applied **RANSAC** to **LiDAR point clouds**, improving accuracy by **60%** detecting and removing outliers.

Face2Learn | HTML, Tailwind CSS, JavaScript, Python, MySQL, TensorFlow, Figma

Sep 2025

- Designed a Chrome extension in under **36** hours with **65% accurate** facial emotion recognition for autistic learners.
- Adapted a **TensorFlow CNN** with **Haar Cascade** face detection to classify **7 emotions** from Youtube videos.
- Built accessible YouTube overlays with **Tailwind CSS** and **Canvas API** for real-time captions and visual cues.

ReCueCareer | Next.js, TypeScript, Python, Flask, Tailwind CSS, Supabase, Auth0

Jul 2025

- Crafted a **Python + bs4** scraper extracting **100+ jobs/session**, ranked by semantic embedding similarity scores.
- Developed a dashboard with **Next.js**, **TypeScript**, and **Tailwind CSS**, surfacing job insights via **Python APIs**.

TECHNICAL SKILLS

Languages: Python, C#, Java, Swift, HTML/CSS, TypeScript/JavaScript, SQL

Frameworks/Libraries: .NET, Tailwind CSS, Next.js, React, PyTorch, Scikit-learn, NumPy, TensorFlow, AWS CDK

Tools/Platforms: Linux, Xcode, VS Code, GitHub, Azure DevOps, Notion, Figma, Docker, MySQL, AWS, Snowflake