

# Alexis Orellana

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## EDUCATION

**University of Houston** | *Bachelor of Science, Computer Science, Minor in Mathematics*      **Aug 2022 - May 2026**

## EXPERIENCE

### Amazon Web Services (AWS)

*Cloud Engineering Intern*

*Dallas, TX · May 2025 - Aug 2025*

- Resolved complex, simulated technical issues across EC2, VPC, and S3 by applying advanced debugging & troubleshooting techniques to diagnose network configurations and security protocols.
- Developed and deployed a fault-tolerant web application using Node.js, Application Load Balancer (ALB), Auto Scaling Groups (ASG), EC2, and Git-based CI/CD pipelines, achieving automated scaling and 99.9% uptime.
- Optimized reinforcement learning (RL) model for AWS DeepRacer using Python scripting and API integration with AWS DeepRacer service, improving lap performance by 15% through reward function tuning and iterative model evaluation.

### University of Houston CougarCS

*Director of Operations*

*Houston, TX · Dec 2025 - Present*

- Recruited and managed a 4-person Operations Committee, delegating tasks for event setup, logistics, and inventory management to ensure seamless execution of club activities with a focus on client service orientation.
- Orchestrated the procurement and delivery of resources for large-scale events, coordinating directly with the Events Chair and VP of Finance to maintain budget compliance.
- Implemented strict inventory control protocols for the organization's storage, ensuring 100% accountability for club assets and supplies.

### Operating Systems Workshop Director

*Houston, TX · Sep 2024 - Nov 2025*

- Directed a monthly workshop series for 30+ students, designing and presenting curriculum on complex OS concepts using software development lifecycle frameworks that yielded a 15% increase in assessment scores.

## PROJECTS

### Serverless Metadata Extraction Pipeline | AWS

**Jun 2025 - Aug 2025**

- Built a fully automated, serverless ETL pipeline handling file ingestion via S3, processing via Lambda, and NoSQL storage in DynamoDB, eliminating the need for server management.
- Implemented AWS Step Functions to handle error handling and workflow logic, ensuring reliability during data extraction processes.
- Deployed a secure, full-stack web portal using API Gateway and Amazon Cognito, allowing users to safely upload files and view extracted data with sub-second latency.

### Full-Stack Workshop Management System

**Jan 2025 - Mar 2025**

- Engineered a relational database schema to model complex, many-to-many relationships between makers, projects, and materials.
- Implemented advanced SQL triggers to automate critical business logic at the database level.
- Developed a secure role-based access control (RBAC) system using JWT, providing distinct "Admin" (full CRUD) and "Maker" (read/log) permissions that controlled both API endpoints and UI visibility.
- Built a RESTful API with complex, aggregated queries to generate dynamic reports, such as calculating the total material cost for any given project.

## TECHNICAL SKILLS

- **Languages:** Java, Python, C/C++, JavaScript, HTML/CSS
- **Frameworks:** React, Node.js, Flask, FastAPI, Express.js, pandas, NumPy, Matplotlib, scikit-learn
- **Cloud, DevOps & Tools:** AWS, GCP, Docker, Git, CI/CD, Serverless, Lambda, EC2, Step Functions, VS Code, Linux, Bash Scripting
- **Certifications:** AWS Certified Solutions Architect Assoc., AWS Developer Assoc., AWS AI Practitioner, AWS Cloud Practitioner
- **Databases:** SQL (Postgres), NoSQL
- **Professional Skills:** Software Development Lifecycle, Debugging & Troubleshooting, Client Service Orientation, API Integration