

Jonathan Velazquez Perez

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Education

Emory University

Atlanta, GA

Bachelor of Science in Computer Science

Expected Graduation May 2028

- QuestBridge National College Match Scholar; Amazon Future Engineer Scholar
- **Coursework:** Machine Learning, Natural Language Processing, Database Systems, Data Mining, AI, Data Structures and Algorithms, OOP

Experience

Amazon Web Services – Software Development Engineer Intern

May 2026 – August 2026

Amazon S3 Simple Storage Service

- Building an automation service for Amazon S3 on-call engineers, owning backend development, monitoring, testing, and deployment
- Developing Go-based validation workflows with DynamoDB, CloudWatch, AWS CDK, and internal AWS APIs to automate 200+ annual maintenance request reviews
- Designing fault-tolerant validation logic to automate 90%+ of recurring reviews while routing manual edge cases through monitored fallback paths

Amazon Web Services – Software Development Engineer Intern

May 2025 – August 2025

RAG AI Support Chatbot for S3 Glacier

- Built and deployed an on-demand AI assistant for AWS data center technicians, enabling faster access to 100+ technical documents, historical issue logs, and hardware health data
- Developed a serverless RAG pipeline using Lambda and API Gateway for request handling, Bedrock for generation, Kendra for retrieval, and DynamoDB/S3 for persistent storage
- Reduced escalation load for on-call engineers by automating responses to 5–8 recurring technician support questions per day, improving first-response speed for operational issues

NYU Tandon School of Engineering – Junior Research Intern

June 2023 – August 2023

Immersive Computing Lab

- Developed a Unity/C# virtual environment for spatial neglect assessment and presented findings to NYU faculty and Kessler Foundation researchers

Projects

AuthentiGuard | Python, FastAPI, JavaScript, PyTorch, HuggingFace, Chrome MV3

- Built a Chrome extension and FastAPI backend that scores X and Reddit posts in-feed using RoBERTa, LLM judges, and stylistic features, achieving 0.87 AUROC on a RAID evaluation slice

Constrained Rocket Ascent RL | Python, PyTorch, Stable-Baselines3, Gymnasium, NumPy

- Built a 2D rocket-ascent control pipeline that evolved from failed PPO reward shaping into expert-guided DAgger/behavior cloning and guarded PPO fine-tuning, reaching 99.0% held-out success while maintaining q/g safety constraints across 35 stress-test scenarios

Skills

Languages: Python, Golang, C, PostgreSQL, Java, TypeScript, JavaScript, ARM

Technologies: AWS Lambda, API Gateway, DynamoDB, S3, CloudWatch, Bedrock, Kendra, AWS CDK, GCP, Git, Blender, Unix

Software Engineering: Cloud Application Deployment, REST API Development, Unit Testing, Integration Testing, Code Reviews, Technical Documentation

Leadership

Co-Director, Kesem Atlanta

January 2025 – Present

- Co-led a 14-member executive team and raised \$15,000+ for a nonprofit supporting children impacted by a parent's cancer