

Amed Espinosa

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PROFESSIONAL SUMMARY

Backend-focused Software Engineer with production experience in distributed systems, cloud infrastructure, and LLM-powered services. Builds multi-tenant SaaS platforms with high test coverage and CI/CD discipline; comfortable across the full stack in Python, Java, and Swift. Brings research depth from applied ML work alongside hands-on production engineering.

EDUCATION

Miami Dade College

Bachelor of Science, Information Systems Technology — Concentration in Software Engineering.

Miami, FL

Expected May 2027

Relevant Coursework: Java Development, Cloud Computing, Data Structures, Software Testing, Agile Methodologies, AI, iPhone App Development, Applied Robotics

EXPERIENCE

Software Engineer Intern

July 2025 – January 2026

DataRemote

Cutler Bay, FL

- Architected a cloud-agnostic S3 integration layer using SOLID principles and the Factory pattern, decoupling legacy backend code from provider-specific dependencies and enabling an AWS-to-Ceph migration with zero code changes.
- Engineered a cross-node broadcasting system for MQTT (EMQX) clusters tracking device status and disconnections across 6+ independent clusters, increasing backend scalability and communication reliability.
- Extended a Python device simulator to model unstable networks, out-of-order discoveries, and Last Will and Testament (LWT) scenarios, surfacing edge-case backend failures affecting 150k+ devices.
- Pinpointed infrastructure bottlenecks via distributed stress testing with MinIO Warp, demonstrating stability under 1,500+ concurrent connections and 3,000+ objects/sec.

Computer Science Engineer Intern

September 2024 – May 2025

Miami Dade County

Coral Gables, FL

- Executed a complete refactoring of the department's internal site, improving user experience and accessibility across 9 teams.
- Built automation tools and scripts for legacy county systems, eliminating manual data entry across 3,500+ records and enrolling 700+ employees and contractors in training programs.

PROJECTS

Load Scorer — SaaS Web App for Trucking Dispatchers

December 2025 – Present

Creator & Lead Engineer

- Architected and built a multi-tenant FastAPI and React SaaS for trucking load profitability, supporting authenticated load calculation, saved history, and tenant-scoped CRUD workflows.
- Built an LLM-powered freight load ingestion service converting unstructured rate confirmations — raw text, PDFs, and phone photos — into validated load records; per-field confidence scores gate a threshold-based auto-submit vs. human-review path, shipped with 38 unit and integration tests.
- Implemented backend layers across routers, services, repositories, SQLAlchemy models, and Pydantic schemas with Auth0 JWT validation and role-aware access; built a React/Mantine frontend with multi-stop load forms and profitability dashboards.
- Established CI/CD foundations including Alembic migrations, health/readiness/version endpoints, staging deploy scripts, smoke tests, and rollback workflows behind an 85% coverage gate; backend sits at 97.3% coverage across 2,196 tracked lines.

Emoticode — iOS Multi-modal Emotion Detection App

May 2025 – October 2025

Lead Research Developer

- Competed for and won a spot in the Summer Research Program at MDC's School of Science; presented at the MDC Undergraduate Research Symposium and travel-selected for the Florida Undergraduate Research Conference (FURC) at UF.
- Built a multimodal emotion detection system across audio, facial expressions, and text optimized for on-device performance, integrating TFLite face detection, Emo-AffectNet, OpenAI Whisper, and CardiffNLP's TweetNLP in a Swift iOS app.

SKILLS

Languages: Python, Java, JavaScript, Swift, SQL, C++

Backend & Distributed Systems: FastAPI, REST APIs, Kafka, MQTT (EMQX), Spring Boot, Node.js

Cloud & DevOps: AWS, Docker, CI/CD, Git, Linux, Ceph, MinIO, Ansible

AI/ML & Mobile: TensorFlow Lite, OpenAI Whisper, CoreML, Emo-AffectNet, SwiftUI

AI Dev Infrastructure: AWS Bedrock, Claude Code, Codex, MCP servers & agents, GitHub Copilot

Spoken Languages: English (Fluent), Spanish (Native)