

Eduardo Morales

Senior Full-Stack / AI Engineer

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Hands-on engineer building production AI experiences for ESPN, Wimbledon, the US Open, the Masters and the GRAMMYS. Combines React and TypeScript frontends with Python, NLP and cloud delivery, with ownership of performance and live-event reliability. IBM-certified Expert Developer and ACM KDD author and presenter.

EXPERIENCE

IBM

May 2018 - Jan 2020 | Apr 2021 - Present

Senior Software Architect

Previously: Advisory Software Engineer (2023-2025); Staff Software Engineer (2021-2023); Associate Software Engineer (2021); Software Engineer Intern (May 2018 - Jan 2020).

ESPN Fantasy Football

- Led the Next.js, React and TypeScript rewrite of a decade-old insights widget; delivered **4x faster loading** at approximately 2 seconds and cut file size **10x**, from 2 MB to 200 KB.
- Unified mobile and desktop implementations, reduced initial API calls from **6 to 3**, and raised the Google site-speed score from **65 to 100**. Led CI/CD migration for **12+ OpenShift applications**.
- Built **100+ automated checks** running every 15 minutes, saving hundreds of debugging hours over four years. Adapted the monitoring dashboard for the Masters and supported client testing and model evaluation.

Wimbledon and US Open: Match Chat

- Led the React frontend for Wimbledon 2025 and supervised its reuse at the US Open; the combined Match Chat deployment reached **nearly 1 million unique users**.
- Built a fallback that retrieves curated answers using vector embeddings and cosine similarity when watsonx Orchestrate exceeds **5 seconds**; integrated pre-cached answers and Akamai caching to reduce live model demand.

The Masters: Video Moments Vault and AI Commentary

- Led data science and search backend development for the 2025 Video Moments Vault using **Python, Flask, watsonx and Elasticsearch**, including hybrid semantic and full-text search.
- Replaced inconsistent LLM player-name extraction with a POS tagger, fuzzy matching and player validation, improving query interpretation while restricting searches to eligible Masters players.
- Designed reusable synthetic-data and text-generation components for sports insights and commentary across ESPN and major tournaments; led **Spanish AI commentary** delivery for the Masters.

GRAMMYS: Nominee Insights

- Contributed to an **NLP insights pipeline** that crawled source content and selected key facts about GRAMMY nominees for live television and website coverage.

Google

May 2020 - Jan 2021

Software Engineer Intern

- Built a React application to explore COVID-19 correlations in Google's knowledge graph and automated ingestion of datasets from **1,000+ pages**.
- Improved Google Cloud Build project performance by **80%** by migrating to Selenium Grid.

Florida International University

Jan 2020 - Sep 2025

Research Assistant

- Created a React Native and serverless maternal and infant health research app; mentored **60+ students** maintaining and extending the application.
- Developed regression and machine learning models to predict wine toxin levels for research supported by a **\$250,000 USDA grant**.

Waleteros Fintech

Nov 2016 - May 2018

Junior Software Developer | Fintech

- Developed a React Native mobile app with a Java backend; designed and implemented **30+ screens** across the application.

TECHNICAL EXPERTISE

FULL STACK

Python, TypeScript, JavaScript, React, Next.js, Node.js, Flask, React Native, Java, D3.js

AI AND SEARCH

Generative AI, LLM integration and evaluation, NLP, PyTorch, BERT, vector embeddings, Elasticsearch, hybrid search, synthetic data

CLOUD AND DELIVERY

OpenShift, Kubernetes, IBM Cloud, AWS, Google Cloud, CI/CD, Travis CI, Akamai CDN, SQL and NoSQL, automated testing

RESEARCH AND INVENTIONS

Match Chat: Real Time Generative AI and Generative Computing for Tennis

Co-author | arXiv preprint, 2025

Large Scale Generative AI Text Applied to Sports and Music

Co-author and conference presenter | ACM KDD 2024, Barcelona

Forecasting Sound in a Live Performance to Determine Microphone Position

Co-inventor | U.S. Patent 10,939,203, granted 2021

RECOGNITION

IBM Corporate Technical Award, 2025

Near Real-Time Generative AI for Live Events

IBM Top Performer

Earned Top Performer ratings in every review since joining.

IBM Patent Plateau Awards

First (2021), Second (2023), Third (2024)

IBM Developer Profession | Level 3 Expert

EDUCATION AND LANGUAGES

Florida International University

B.S. in Computer Science

English, Spanish and Catalan

Native proficiency