

ISAAC MARTIN

iaaamartin@gmail.com | New York, NY | 512-660-8888

WORK EXPERIENCE

Capital One – *Senior Associate Software Engineer*; New York, NY July 2024 – Present
Enterprise ML Feature Platform (Python/SQL) that serves features to all machine learning models (e.g. fraud, underwriting)

- Built an engine to migrate 166+ features from individual to group-based compute, saving \$5.6 million per year in AWS spend
- Shipped a RAG prototype in 4 days in partnership with a VP of Compliance to retrieve relevant documents for bank exams
- Led a 3-engineer team to ship greenfield Python SDK functionality, automating data quality and publishing for ML features
- Developed a Python-based AI SDK that creates production-grade features from SQL, winning an 80-person hackathon
- Cocreated a greenfield Python XGBoost secret detection hook distributed across all repositories in the AI/ML division
- Architected a stateful LLM agent to aggregate 13+ siloed repositories and enforce automated data refreshes
- Engineered EMR-based PR tests to compute features, enforcing ETL dependency and data quality gates prior to merging code
- Spearheaded shadow tests for data comparison between Machine Learning features and feature groups
- Led design and POC of Python-based Blue-Green deployment strategy to verify parity across feature versions
- Designed a Python-based feature data quality validation policy to ensure model integrity and prevent downstream degradation

Capital One – *Associate Software Engineer, Enterprise Architecture*; New York, NY February 2023 – June 2024
Enterprise Architecture team (React/Go/SQL) responsible for standards and resiliency for all Capital One applications

- Developed a Rego policy to enforce preauthorized API communication across all applications
- Led a regional AWS failover exercise of the Architecture division's 30-application system
- Led website telemetry integration and built AWS QuickSight dashboards to empower management with user drop-off insights

Capital One Developer Academy (CODA) – *Software Engineer in Training*; McLean, VA August 2022 – January 2023

- Learned how to program full-stack web applications with languages such as React, Python and SQL

AI & MACHINE LEARNING PROJECTS

CS6601: Artificial Intelligence — Georgia Institute of Technology

- **Deterministic & Adversarial Search:** Implemented complex state-space search algorithms, including A* search with custom priority queues and Minimax, for optimal decision-making in constrained environments
- **Probabilistic Modeling & Bayesian Networks:** Engineered exact and approximate inference algorithms, utilizing Gibbs sampling to evaluate probabilistic relationships and predict states within high-dimensional Bayesian networks

Autonomous Investment Research Project in Collaboration with a Hebbia Engineer

- Created a self-expanding supply-chain knowledge graph of AI-sector categories and companies, mined from 10-K filings to surface second-order beneficiaries
- Built an end-to-end autonomous research pipeline that ingests investment theses from Twitter and Substack, decomposes them into atomic, falsifiable claims, and verifies each claim against primary sources before any trade signal is generated

EDUCATION

Georgia Institute of Technology Master's Degree in Computer Science Expected May 2027
Specialization: Artificial Intelligence
GPA: 4.0

The University of Texas at Austin Bachelor's Degree in Quantitative Finance May 2022
Certificate: Applied Statistical Modeling
GPA: 3.91

HONORS

- AWS Certified Solutions Architect – Associate May 2023
- AWS Certified AI Practitioner May 2025
- Eagle Scout November 2017

ADDITIONAL INFORMATION

Languages: Python, React, Go, Rego, SQL, R, JavaScript

ML & Frameworks: Scikit-Learn, NumPy, Pandas, XGBoost

Interests: French Language, Japanese Language, Advent of Code, Taiko Drumming, Basketball, Climbing