

Marco Acea

About

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Programming Languages

Python
C++
TypeScript
JavaScript

Software/Frameworks

OpenAI API
🤖 Hugging Face
PyTorch
scikit-learn
pandas
Dask
LLM Prompt Engineering
Distributed Systems
Bloomberg API
Alpaca
Algorithmic Trading
Risk Management
Real-time Systems
Feature Engineering
Production ML

Education

Carnegie Mellon University

08/2018 - 12/2022

Bachelor's of Science in Electrical and Computer Engineering

- Structure and Design of Digital Systems
- Web App Development
- Principles of Imperative Computing
- Logic Design and Verification
- Intro to Embedded Systems
- Fundamentals of Embedded Control

Experience

Bloomberg L.P

07/2024 - Present

Software Engineer - Electronic Trading Order Management Systems (ETOMS)

- Designed and delivered critical features for global trading platform serving thousands of financial firms, processing millions of daily transactions.
- Built comprehensive monitoring and analytics systems tracking millions of user events, providing real-time insights and operational resilience.
- Developed high-performance dashboards and data visualizations enabling traders to efficiently manage complex workflows across global markets.
- Built self-optimizing LLM systems with advanced prompt engineering, creating intelligent automation that continuously refines model performance and accelerates development velocity.

Boeing

03/2023 - 04/2024

Software Engineer

- Developed automated UI integration tests using Selenium for web applications which significantly improved code base test coverage
- Developed Virtual Machine devices for the High Fidelity Digital Twin Program

Intuit

05/2021 - 08/2022

Software Engineering Intern - DevX, Argo Project

- Developed a containerized GraphQL Proxy Service using Typescript, Docker, and Redis for optimization, that protects API services from potentially malicious incoming requests using rate limiting and static query analysis
- Developed new feature for the ArgoCD project that allows non-admin users to safely create Applications and Projects for themselves within a Kubernetes cluster.

23andMe

07/2020 - 09/2020

Software Engineering Intern

- Built Flask-based internal application management dashboard for the Application Infrastructure Team, streamlining service monitoring and authentication workflows.

Projects

Mid-Frequency ML Trading System

Ongoing

Algorithmic Trading Risk Management Real-time Systems S&P 500
Feature Engineering Production ML

- Built electronic trading system processing S&P 500 data with neural networks (294K+ parameters) achieving 60%+ model accuracy and sub-100ms signal generation for real-time execution.
- Conceived and developed production-grade system with risk management, position sizing, and automated model retraining, featuring real-time P&L tracking and order execution via Alpaca API.
- Implemented monitoring stack with Prometheus/Grafana tracking win rates, fill rates, model/system latency metrics across 500+ symbols with 50+ technical indicators.

ArgoCD AppSource Controller

05/2021 - 08/2021

Golang Kubernetes ArgoCD

- Built secure automation platform enabling self-service application deployment with multi-tenant access controls and safety guardrails, open-sourced and officially adopted into vetted community collection.