

MOHAMED NAGATY

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Dubai, United Arab Emirates

EXPERIENCE

Cobblestone Energy

November 2021 - Present

Automated Trading Developer | November 2024 - Present

Dubai, United Arab Emirates

Software Developer | June 2023 - November 2024

Junior Developer | November 2021 - June 2023

Cobblestone Energy is a commodity trading firm focused on intraday and forwards and futures power and gas trading.

- Spearheaded the firm's integration with Trayport to enable programmatic access to OTC power markets including exposing an API to facilitate orderbook management, trade execution and own order management.
- Developed an exchange agnostic backend system that supports direct connectivity to EPEX and N2EX, with connectivity to EEX and ICE via TT - C# used for performance critical components and Python elsewhere.
- Developed various fully automated low-latency trading algorithms that manage in-memory orderbooks and open/close positions on the market autonomously.
- Standardized algorithm development via an asynchronous algorithm base class that simplifies future development and enables responding to orderbook, own order and own trade triggers.
- Deployed algorithms to exchange collocated Kubernetes clusters with cross-connects via Bitbucket CI/CD pipelines ensuring a streamlined development process and high scalability and availability.
- Designed and developed a cloud native real-time internal alerting system for traders that is based on AWS Serverless (API Gateway, Lambda + Step Functions, DynamoDB, SNS and CloudFormation).
- Utilized FastAPI and Flask for the development of various internal micro-services.
- Migrated various CRONs to DAGs written on Apache Airflow ensuring maintainability and reliability.

Dell EMC

May 2021 - August 2021

Software Engineering Intern

Dubai, United Arab Emirates

- Utilized Java's Spring Boot framework to develop REST APIs that are utilized as part of the firm's client onboarding experience.
- Gained experience using JPAs and the Hibernate ORM for entity mapping.
- Containerized micro-services using Docker and deployed to a bare metal K8s cluster.
- Used Boto3 for interaction with Dell ECS Enterprise Object Storage.
- Followed scrum and agile workflows making use of Jira, Tempo, etc..

Salus Lab

June 2020 - August 2020

Software Engineering Intern

Dubai, United Arab Emirates

- Developed a REST API using Django to streamline interaction with various internal networking tools and visualized data using VueJS and ChartJS on a frontend.

PROJECTS

Meal Mill

- Founded, developed and deployed Meal Mill, a Django powered passion project that allows users to automatically generate customized meal plans at the click of a button.
- Used the Spoonacular API to access tens of thousands of meals and ensure extensive choice for users.

SKILLS

Programming Languages: Python, C#, Java, SQL, JavaScript, TypeScript

Tools & Frameworks: FastAPI, Flask, Asyncio, Pytest, .NET Framework 4.8 and .NET 8+, PostgreSQL, Timescale, React, ChartJS, Grafana, Kibana (Elasticsearch), Jira

Technologies: Git, Docker, Kubernetes, Airflow, AWS (API Gateway, Lambda, Step Functions, DynamoDB, ElasticCache, S3, SNS, CloudFormation, RDS and CloudWatch)

Languages: English and Arabic

EDUCATION

American University of Sharjah

June 2021

Bachelor of Science in Computer Science

GPA: 3.64/4 (Cum Laude)

Achievements: Chancellor's List, Dean's List, Upsilon Pi Epsilon (UPE) Honors Society, IEEE CS Treasurer