Jacob Atnip

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EXPERIENCE

Software Engineer - Data Platform **August 2021 - Present**
JP Morgan Chase, Plano, TX

- Implemented major components of a performance testing data generation system written in Python running on AWS EMR, Spark, Lambda, and S3, capable of processing 30 TB of data per day with select components optimized to handle 60 TB per day
- Collaborated with a team of eight to design and implement a distributed system written in Java running on AWS EMR, Lambda, Snowflake, Delta Lake, and Reshift. The system enables the event-driven and scheduled based execution of user-defined data refiners with the ability to query hundreds of terabytes of data
- Led the development of a CLI tool written in Golang used for monitoring the health and progress of tasks running on a distributed system spread across three environments where conventional telemetry methods were not viable

Software Engineer **June 2021 - August 2021**
Startup, Dallas, TX

- Developed Python data pipelines responsible for ingesting and curating raw data, and subsequent feature engineering for training datasets
- Responsible for deployment of NLP models and inference on curated datasets
- Created Python program utilizing nearest neighbors algorithm to decrease manual data labeling time by 80%

SKILLS & PROJECTS

Python | Golang | Rust | Java | Terraform | Docker | Spark | Lambda | EMR | EC2 | S3 | DynamoDB | Redshift | SQS | Cloud Run | Cloud Storage | Firestore | APIs | gRPC | CLI Tools | TensorFlow

Recreation Monitoring and Alerting Service

- Monitors and notifies users on the availability of campsites and recreation permits on rec.gov
- Written in Golang and deployed as a distributed system of microservices running on Google Cloud Run, Cloud Storage, and Firestore
- Constructed an orchestrator to invoke up to 1000 severless containers in parallel with each container running multithreaded code to ensure all monitoring locations have equal priority

Backtester

- Software for testing rules based stock trading strategies on historical data
- Developed with the TDD methodology to ensure correctness
- Originally written in Python, switched to Rust to increase performance by orders of magnitude while retaining memory safety

ZCAPM: Implemented the ZCAPM asset pricing model utilizing the expectation maximization algorithm in python for Dr. James Kolari.

- https://github.com/zcapm/zcapm_python

EDUCATION

The University of Texas, Austin, TX
Continued Graduate Education - Computer Science

Texas A&M University, College Station, TX **May 2021**
Bachelors of Business Administration in Finance GPA: 4.0
Double Minor in Mathematics

Significant Coursework:

- Data Structures & Algorithms | Operating Systems | Machine Learning | Calculus I, II, III | Probability & Statistics | Linear Algebra | Differential Equations | Real Analysis