DAVID KOGAN


davidkogan109@gmail.com


917-232-3969


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EDUCATION

Computer Science
Master of Engineering
Cornell University '20
GPA: 3.75

Operations Research & Engineering
Bachelors of Science
Cornell University '17
GPA: 3.81
Magna Cum Laude

SKILLS & COURSES

Skills:
Python
Angular
Typescript
HTML, CSS
REST API
Objectscript
Java
Rust
R
SQL
Docker
Kubernetes

Courses:
Algorithms, Object Oriented Programming & Data Structures, Discrete Structures, Applied Machine Learning, Deep Learning, Computer Vision, Natural Language Processing, Probability & Statistics

WORK EXPERIENCE

Full Stack Software Engineer, InterSystems
Cambridge, MA — Jan 2021-Present
- Developed a scalable service in Python using Ray for parallel processing to stratify large datasets and apply custom analytics. Containerized with Docker and deployed to a Kubernetes cluster using Helm charts
- Contributed extensively to full-stack development for InterSystems products, integrating frontend systems (Angular, TypeScript, HTML) with REST APIs. Backend systems utilized Python, Java, and ObjectScript
- Built a shim using Rust to map input/output operations to AWS S3 cloud storage. Successfully hooked open(), close(), read(), write(), readv(), writev(), fsync() to perform operations with S3 objects

Quantitative Trading Intern, Volant Trading
New York, NY — 2018
- Developed GUI using Python to track trading metrics in real-time, including Volant's risk tolerance relative to risk tolerance implied by market activity. Deployed for use by the entire trading floor
- Actively participated in desk's daily options trading

Data Science Fellow & Corporate Trainer, NYC Data Science Academy
New York, NY — 2017-2018
- Taught six Bloomberg employees how to use Python for data analysis with pandas. Tutored individually, crafted exercises and assisted with projects
- Built web scraper with Selenium to scrape comment data from Soundcloud. Scraper handled dynamic pages and pop-ups. Created web app using Shiny in R to display results

ENGINEERING PROJECTS

BigQ, Cornell University — 2020
- Built trivia app with live video hosting for Cornell Tech's Startup Studio
- Used Flutter for frontend and GraphQL, MongoDB and Node.js for backend

Sentiment Classification, Cornell University — 2020
- Applied industry-leading language representation models BERT, AlBERT, DistilBERT and RoBERTa to fine-grained sentiment classification task on SST-5 dataset
- Achieved state-of-the-art performance (60.2% accuracy) with RoBERTa pre-training

Drowsiness Detector, Personal — 2020
- Built drowsiness detector with real-time video stream using OpenCV and Dlib
- Accurately detected face and eyes, sounded alarm if eyes started closing

NBA Modeling, Personal — 2019
- Developed algorithm to model in-game scoring volatility of professional basketball games
- Used principles from options pricing theory in conjunction with a recurrent neural network
- Scraped game data for analysis with Selenium
- Generated 26% return in first half of 2019-2020 NBA season

Recommendation Engine, Breaking Hits — 2017
- Developed recommendation engine for music startup Breaking Hits
- Applied collaborative filtering to predict preferences with Python's Surprise library. Used network analysis to overcome cold-start problem
- Ingested data with SQL connector and deployed results with Flask