Yun Han Xiao

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github.com/hanburger97

skills

general: Git, Agile, CI Development
language: C/C++, Python, R, Javascript (NodeJS ES6), Bash
frameworks/libraries: XG Boost, PyTorch, Tensorflow, Apache Kafka, CUDA, Pandas
tools: Docker Swarm, Zookeeper, CMake, Jupyter Notebook, RStudio / Shiny

experience

Intact Financial Corporation Data Lab Intern — May 2018 – August 2018

- Built a custom in-house library for data modeling for a new statistical learning pipeline
- Reduced runtime for training and cross-validation of XGBoost models by integrating Dask, a distributed computing framework in Python
- Applied software engineering design to distributed cross-validation algorithms with the cooperation of actuaries.
- Built a fault-tolerant and highly-available software infrastructure for the data lab team using Docker swarm.
- Optimized load-balancer algorithms for session balancing between RStudio Pro instances in the computer cluster.

Nuance Communications Canada QA Automation Intern — May 2017 – August 2017

- Reduced overhead of load testing by moving away from JMeter to a custom multi-threaded test framework monitored in real-time using NetData
- Automated server configurations for test cases by building a REST API in ExpressJS that injects bash commands during test case setup.
- Managed testing VPS environment configuration and engine set-up
- Gained significant insight on test-driven development by implemented automated testing scripts with JUnit and Unittest

Wedo Services Software Engineering Intern — July 2016 – October 2016

- Integrated quick quote feature that calculates surface area by coloring a canvas layered over a satellite image
- Designed and built a service chatbot using Facebook's Messenger API over Webhooks
- Built reactive interfaces with Meteor JS's two-way data binding's protocol (DDP) over the WebSocket.

projects

Data Analysis on implied volatility for commodities — July 2018 - present

- Trying to analyze the effect of the World Agricultural Supply & Demand report (WASDE) published monthly by the USDA on the implied volatility dynamics for grain commodities.
- Data Mining: pulled historical at-the-money bar data (50 delta) from ECBOT through Interactive Brokers' API in C++ on ZC (Corn Futures) options expiring one month before the underlying's expiration
- Feature Engineering: Compiling risk-free rate (LIBOR/OIS), time to expiration in years, etc. for each timestamp (bar). Computing Implied volatility for each bar according to Black's model

education

University of Waterloo

Bachelor's in software engineering, minor in Computational Mathematics — 2017- 2022