Aaron (Shixiang) Zhou

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EDUCATION

Columbia University (CU), New York, NY — Sept. 2016 – Feb. 2018
Master of Science, Industrial Engineering — GPA: 3.87

University of Michigan (UM), Ann Arbor, MI — Sept. 2014 – Apr. 2016
Dual Degree Program: Bachelor of Science, Industrial and Operations Engineering — GPA: 3.86

Shanghai Jiao Tong University (SJTU), Shanghai, China — Sept. 2012 – Aug. 2016
Dual Degree Program: Bachelor of Science, Electrical and Computer Engineering — GPA: 3.63

Courses: Machine Learning, Personalization, Cloud Computing, Dynamic Pricing, Data Structure & Algorithm

EXPERIENCE

PanAgora Asset Management, Boston, MA — Feb. 2018 – Present
Quantitative Equity Research Intern

- Web scraped Australian short position reports, generated risk-adjusted signals by orthogonalizing short ratios over beta, liquidity, size and other correlated factors, back tested the signal and gained an Information Coefficient of 0.11
- Generated 1,2,3-gram keywords list for 10K/10Q reports to explore research focus of health-care companies in stock market by applying Rapid Automatic Keyword Extraction, fuzzy filtering, topic classification, and fuzzy aggregation

International Business Machines Corporation (IBM), Shanghai, China — Jun. 2017 – Aug. 2017
Product Analyst Intern. B2B2C E-commerce Development (Client: SAIC Volkswagen)

- Interfaced with a development team of 15+ engineers and designers throughout the complete development lifecycle of SAIC Volkswagen's mobile E-commerce website, from design to alpha release in two months
- Drafted and maintained product requirement documents (PRD), and aligned them with tangible deliverables such as user stories, user journey map, Axure prototype, functional specifications and technical requirements
- Worked closely with product manager to improve engineering processes and implement agile methodologies, increased agile team velocity by 18% based on an optimized work process

Jennison Associates LLC, New York, NY — Oct. 2016 – Feb. 2017
C# Applications Intern

- Connected C# cash flow application to database by performing data cleaning, transformation and ensuring integrity
- Created and executed different levels of automated test plans, cases and scripts (unit, functional, and user acceptance) to uncover, identify and document company cash flow system's problems and the causes
- Designed and created system status website showing service availability, eliminated 90% manual test time

PROJECT

Sentimental BGM Chrome Extension (AWS, NLP, recommender system) — Oct. 2017 – Dec. 2017

- Created a chrome extension enhancing web surfing experience with NLP and background music recommender system
- Designed a hybrid music recommender system combining collaborative filtering and sentiment analysis
- Reduced MSE of user hit rate from 0.18 in naive benchmark to 0.13 in the new hybrid system

Text Normalization Challenge (Kaggle NLP competition, XGBoost) — Oct. 2017 – Nov. 2017

- Applied XGBoost with context to label test data by using 10 GB training text (digit/ordinal/address/money/…)
- Created label-wise regex functions to convert labeled phrase into normalized form (e.g. "$2" to "two dollars")
- Gained 99.03% accuracy compared to the 92.6% benchmark

Twitter Sentiment Map (AWS, Node.js, sentiment analysis) — Sept. 2017 – Oct. 2017

- Developed an AWS Elastic Beanstalk web application using Node.js in an auto-scaling environment
- Used Twitter Stream API, Google Map API and AWS Elasticsearch geospatial feature allowing users to search tweets with sentiment analysis in a web UI based on keywords or clicked location

Dynamic Pricing under Competition (INFORMS Challenge, pricing model, EM algorithm) — Mar. 2017 – May 2017

- Coded a Python algorithm learning to optimize pricing policy in a competitive market environment competing for revenue with fellow participants, with known competitors' historical prices and unknown competitors' demand
- Applied EM algorithm to mixed multinomial logit model, used sorted SAA to estimate competitors' prices
- Beat 90% competitors and kept stable revenue over iterations

SKILL

Programming Language: Python, C/C++, SQL, Shell, C#, HTML/CSS, JavaScript
Web Technology: AWS (EC2, Lambda, S3, Elasticsearch), Spark, Django, Nodejs, React, Git, Agile
GitHub: https://github.com/TickTack-z