Aaron (Shixiang) Zhou

z.aaron@columbia.edu • (734) 680-4829 • www-personal.umich.edu/~sxzhou • Boston, MA 02111

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, Cloud Computing, Dynamic Pricing, Recommender System, Data Structure & Algorithm

EXPERIENCE

PanAgora Asset Management, Boston, MA — Feb. 2018 – Present
Quantitative Equity Research Intern
- Web scraped international short selling disclosure, formulated and tested various hypotheses, generated risk-adjusted signals by orthogonalizing aggregated short position ratio and other factors, back tested and productionized the signal with top tier (20%) Sharpe Ratio 1.01, long-short strategy alpha 4.59
- Developed NLP system (Django web app) for healthcare 10K/10Q reports to generate and filter industry-related keywords (drugs, therapies, etc.) by RAKE algorithm, topic classification, and fuzzy aggregation, conducted time series sentiment analysis by Google trends and Google news to explore market sentiment and to predicted future return

International Business Machines Corporation (IBM), Shanghai, China — Jun. 2017 – Aug. 2017
Product Management Intern. B2B2C E-commerce Development (Client: SAIC Volkswagen)
- Interfaced with a development team of 15+ engineers and designers throughout the complete development lifecycle of the E-commerce website, from design to alpha release in two months
- Designed 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
- Designed and developed data warehouse on Oracle database connected to C# cash flow application by performing data cleaning, transformation and ensuring data integrity based on customer requirements and business priority
- 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 automated background music playing
- Designed a hybrid background music recommender system based on user behavior (collaborative filtering) and sentiment analysis (sadness, anger, etc.) of web page users are currently browsing
- 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

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 all other 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, EMR), Spark, Django, Nodejs, React, Bootstrap, Git, Agile
GitHub: https://github.com/TickTack-z