Keliang Wang

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EDUCATION

University of Connecticut, School of Business   Storrs, CT

Ph.D. student in Operations and Information Management department   Aug. 2019 -

Columbia University, School of Engineering and Applied Science   New York, NY

Master of Science in Operations Research   Dec. 2018

Shanghai University of International Business and Economics   Shanghai, CN

Bachelor of Economics in Financial Engineering.   Jun. 2017

PROJECTS

Global Optimization with Neural Network Embedded   Mar. 2020 -

University of Connecticut

- Formulating MIP with neural network as surrogate model; test the optimization model on benchmark functions

Scraping and Analyzing an Online Hack Forum   Sep. 2019 – May. 2020

University of Connecticut, first year project

- Design and implement an automated scraping agent in Python to fetch entire forum data; The dataset has a size of 700 MB with over 3M posts, 150K user profiles and 146 forums
- Maintain the database in MariaDB; write SQL queries to cross validate the tables; conduct topic modeling using LDA to classify topics for each forum;

Bounds of Parametric Sensitivities in Stochastic Simulation   Jun. 2018 - Sep. 2018

Columbia University, summer research project

- Designed a simulation engine in MATLAB to simulate multi-class customers and servers queuing system and track interested performance measures
- Demonstrated that new algorithm outputs upper bound of sensitivities of service rate and arrival rate simultaneously using single set of queuing simulation; compared results with score function method and finite difference

Statistical Factor Model and Portfolio Optimization   Sep. 2017 - Nov. 2017

Columbia University, course project in Application Programming for Financial Engineering

- Computed PCA decomposition of Russell 1000 stocks' return covariance matrix through Power Method
- Applied synthetic factors to conduct mean variance portfolio optimization with short position, coding a C++ program calling Gourbi solver to find optimal portfolio
- Streamlined data extraction and finding optimal portfolio by interacting Excel VBA with C++ program through DLL; experimented on more complex constraints (e.g. optimal assets' quantity limit, minimum position size)

WORK EXPERIENCE

Gfund Management Company   Shanghai, CN

Risk Management Intern   Nov. 2016 - Feb. 2017

- Developed Excel VBA to automate monthly risk control report and quantitative analysis on fund net value
- Monitored the company funds by tracking their rate of return, volatility, max dropdown and beta value with CSI300
- Conducted macroeconomic research and industry research by analyzing key economic metrics from Wind financial terminal

SKILLS & INTERESTS

Computers: MATLAB, Python and C/C++ (Baruch Pre-MFE Program Certification); LaTeX, Gurobi