STEVEN WANG

11 Hudson Pl, Weehawken, NJ 07086 • Mobile: 612-707-5940 • baixiang@umich.edu • Employment Status: OPT 3-Years
LinkedIn: https://www.linkedin.com/in/steven-baixiang-wang-59b258140
GitHub: https://github.com/BaixiangGithub

EDUCATION

University of Michigan   Ann Arbor, MI
Master of Science in Quantitative Finance and Risk Management (STEM) | GPA 3.60/4.00 (expected)   Expected 04/2019
*Relevant Courses: **Computational Data Science (Matrix theories on applications of SVD, Neural Networks, least-square optimization, Regularization, logistic regression, nearest subspace classification, Data matrix factorization using PCA and ICA, etc.) Machine Learning (Linear models, Naïve Bayes, Bayesian Network, HMM, Gaussian Mixture, Gaussian Discriminant Analysis, SVM, etc.)** Financial Mathematics, Linear models, Stochastic Process, Stochastic Calculus*

University of Minnesota Twin Cities   Minneapolis, MN
Bachelor of Arts in Mathematics, Graduate with Honors | GPA 3.84/4.00   August 2017
Relevant Courses: Probability, Fourier Analysis, Partial Differential Equations, Programming in Python, Machine Learning.
- Dean's List, University of Minnesota Twin Cities (2014, 2016)
- Best project in "Classical Mechanics & Calculus of Variation", Penn State University (2015)

EXPERIENCE

Global AI, Inc.   New York, NY
Quantitative Strategy Intern   May 2018 – August 2018
- Modeled Macro financial risk measures such as turbulence & absorption ratio for developing trading scores and conducting asset allocation (MATLAB). (**Fitted Hidden Markov model, linear regression and PCA via using packages in Scikit-learn.**)
- Derived a bivariate Markov regime-switching model from scratch via MATLAB; plugged in GDP growth and inflation for conducting regime-based asset allocation; characterized local maximum region of the likelihood, resulting in achieving a better economic intuition. (**Programmed K-means for parameter initializations, EM optimization, Kim-Smooth algorithm, Hamilton filter and multivariate time series.**)
- Used python to conduct two dynamic asset allocations based on one market timing signal (absorption ratio) and a regime-switching model on turbulence, achieving 52% and 88% increases in the Sharp ratios compared to static strategies.
- Reviewed assigned academic papers, and replicated pricing models from reinforcement-learning (Q-Learning) for portfolio construction (**Dynamic programming scheme, least-square optimizations and Monte Carlo simulations were programmed in python**)
- Back-tested Q-Learning models on GARCH processes (via Python).
- Extracted, filtered, & cleaned financial and macroeconomic data via Quandl & Yahoo Finance (in Python).

CyteTherapeutics, Inc.   Irvine, CA
Biostatistics Intern   Summer 2014
- Performed biostatistical analysis of clinical outcome data from cord blood hematopoietic stem cell transplantation for thalassemia and other disease including HIV using R (see relevant publications).
- **Applied cumulative incidence and statistical models such as logistic regression to search for variables that affect clinical outcome and compare methods of producing stem cells, using R.**
- Performed clinical outcome data verification and analysis using Kaplan-Meier Product Estimates for survival, mortality curves, and relapse rate.

Undergraduate Research Program 'MASS' at Pennsylvania State University   University Park, PA
Visiting Student Researcher   August 2015 – December 2015
- Used MATLAB to complete three computer-based independent projects on lie theory, classical mechanics, and algebraic geometry; and gave presentations at the end of the semester.
- Improved my interpersonal skills by joining in discussions on weekly colloquia sponsored by invited mathematicians.

Independent Project:
Paper trading from Gatev et al. (RFS, 2006)
- Identified best five pairs of energy stocks by studying pair-wise tracking variances among 66 stocks during Mark 31st 2017 to Mar 31st 2018. (via Python)
- Performed pair trading strategy on selected five pairs during April 1st 2018 to Sept. 26th 2018 by following the academic paper. (via Excel)

SKILLS

Skills: Python, R, Matlab, Excel, Machine Learning, Reinforcement Learning, Risk Management, Financial Modeling
Languages: Bilingual (Mandarin & English)

PUBLICATIONS

1. Chow, R., Li, Q., Chow, C., Guo, V., Dang, T., Rao, A., Zeng, T., Chow, D.T.L., **Wang, B.**, and Chow, M., "Cord Blood Stem Cell Processing, Banking and Thawing" in *Umbilical Cord Blood* Ed. Maurício, Ana Colette, Intech Publishers, Rijeka, Croatia, 2016 (Chapter In Press).
2. Chow, C., Dang, T., Guo, V., Chow, M., Li, Q., Chow, D.T.L., Rao, E., Zeng, T., **Wang, B.**, and Chow, R. "Optimization of Unrelated Donor Cord Blood Transplantation for Thalassemia - Implications for other Non-Malignant Indications such as HIV Infection or Autoimmune Disease", in Umbilical Cord Ed. Maurício, Ana Colette, Intech Publishers, Rijeka, Croatia, 2016 (Chapter In Press).