Yancheng Zhang

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EDUCATION BACKGROUND

Columbia University   **New York, NY**
M.S in Data Science   **Aug 2022 - Dec 2023**
Courses: Applied Machine Learning (Python), Algorithms for Data Science (Python), Explanatory Data Visualization (R), Statistical Inference and Modeling (Spring 2023), Deep Learning (Python, Spring 2023), Natural Language Processing (Python, Spring 2023)

Nankai University   **Tianjin, CN**
B.Econ in Finance with Highest Honor, Ranked 1/186 in 3rd Year   **Sep 2018 - Jun 2022**
Courses: Econometrics (PhD), Quantitative Investment, Statistics, Real Analysis, Stochastic Calculus, ODE, Time Series
Honors: Highest Honor in Graduation Thesis, Visiting Student Fellowship, Provincial Scholarship (1%), Innovation Scholarship

WORKING EXPERIENCES

Huatai Securities Co., Ltd.   **Shanghai, CN**
Asset Management Intern   **Jun 2022 - Sep 2022**
- Proposed three-factor model to predict stock-bond correlation based on inflation shock, economic development shock and their correlation, analyzed the transformation of asset allocation under positive stock-bond correlation condition
- Executed Tableau to visualize price changes of Dollar, Gold, Brent Crude, U.S Treasury Bond, etc and divide them into leading assets and delayed assets
- Wrote empirical report based on US monthly data from 01/1919-08/2022 to show real estate & PMI as prior indicators, and unemployment & CPI as delayed indicators during recession so as to argue against Waller's opinion about soft landing

Peking University   **Beijing, CN**
Economics Research Fellow Intern | Prof. Dilshat Wubuli   **Jun 2021 - Dec 2021**
- Used Python to derive a GIFF model to identify potential industries in Yili using trading records and macroeconomics data
- Conducted field study of more than 50 start-up enterprises in Yili Prefecture, summarized Yili's endowment conditions and comparative advantage, including resources, infrastructure, financial condition, development barrier, and relevant policies

Accenture Co., Ltd.   **Beijing, CN**
Management Consulting PTA   **Aug 2020 - Sep 2020**
- Made strategies for a leading internet company to expand the medical information market through public welfare projects
- Summarized welfare project's logic under O2O and B2C e-commerce model, executed case studies on 700+ medical projects

CSC Financial Co., Ltd.   **Beijing, CN**
Quantitative Research Intern   **Jun 2019 - Jul 2019**
- Assisted the development of event-driven stock trading algorithms to guide transaction decision
- Leveraged SVM and random forest ML models to predict future return based on momentum alpha factors for stock selection, including alpha13, ADX, annual firm set growth rate, turnover return, bias turnover, etc.
- Performed automated trading based on technical indicators and strategies, validated by backtesting on 5-year Chinese market

RESEARCH EXPERIENCES

Part-time Research Assistant | Harvard University, Associate Prof. David Yang   **Aug 2021 - Aug 2022**
- Analyzed data from the Ministry of Commerce and various searching engines, studied China's Investment impact on Africa's democratization status over historical effect, infrastructure effect, and substitution effect
- Conducted micro-level matching of Chinese investment projects in Africa and Middle Asia (e.g building infrastructures like roads and railroads); constructed a time-series database for further regression analysis process

Collaborative Researcher | Stanford University, Research Fellow, Peilin Yang   **Mar 2021 - Nov 2021**
- Used Threshold VAR to study the impact of monetary policy's information effect on various macroeconomic sectors under different states of economic uncertainty, as an extension to forward guidance (McKay, Nakamura and Steinsson, 2016)
- Deployed co-movement of high-frequency federal fund future changes and S&P 500 indexes to identify information effects; leveraged MATLAB to obtain the posterior distribution of the model based on a combination of Gibbs sampling and MLE

Financial Engineering Course Project | Nankai University   **Feb 2021 - Jun 2021**
- Priced various path-independent options (European) and path-dependent options (Barrier, American) in MATLAB:
- Gained familiarity with option pricing theory within the Brownian motion and Black-Sholes framework, employed Cholesky decomposition to simulate correlated normal random variables for pricing barrier option
- Employed OLS regression to enable backward induction for pricing American option, leveraged Monte Carlo simulation to derive option pricing; employed antithetic variates and importance sampling for variance reduction.
- Calculated the Greeks (Delta, Gamma, Vega) of options and practiced multiple hedging strategies for risk management

PRESENTATIONS AND SEMINARS

2021 Shanghai International Finance Center Conference, Shanghai University of Finance and Economics
- Was Green Credit Policy Driven the Transformation or Transfer of High-Polluting Enterprises

SKILLS

Programming: Python (NumPy, SciPy, Pandas, Scikit-Learn, Matplotlib, Seaborn, Selenium), MATLAB, Stata, LaTex, SQL
Language: English (Tofel: 115, GRE Offline Test: 331), French (Intermediate), Mandarin (Native Speaker)