Curriculum Vitae

Jinhua Lyu

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Education

University of Texas at Austin, Graduate Student   ***2022 Aug-2024 May(Expected)***
Current GPA: 4.0/4.0
Core courses: Linear Programming (A) / Applied Probability (A) / Math Statistics for Application (A) / Integer Programming (A) / Applied Stochastic Process (A) / Network Optimization (A)
Fellowship:
- Engineering Fellowship

Nankai University (NKU), Bachelor of Finance Management   ***2018 Sep-2022 Jun***
Overall GPA: 3.94/4.0
Math Related courses: Operations Research (90%) / Ordinary Differential Equations (97%) / Advanced Algebra and Analytic Geometry (91%) / Statistics (97%)
Honors and Scholarships:
- National Scholarship
- Yinfeng-Yitian-Emerson Scholarship
- Innovation Scholarship
- Cultural and Sports Scholarship
- Meritorious Winner in the Interdisciplinary Contest in Modeling

Academic Researches

Research 1: Designing Electricity Vehicle Charging Infrastructure To Enable Disaster Evacuation
Research Assistant, University of Texas at Austin, Austin, USA (present)
Supervisor: Dr. Benjamin D. Leibowicz
- Contribute to the two-stage stochastic program formulation
- Build evacuation network and discretize the network into approximately 18-mile segments for each arc
- Generate 50 different scenarios for wild fire case study

Research 2: An extension of Markowitz's mean-variance portfolio theory: considering investors' sentiment (Individual)
Nankai University, Tianjin, China
Supervisor: Prof. Su Zhang
- Collected millions of data from the stock message board of Eastmoney.com in the Chinese stock market by using Python web crawler technology
- Utilized word segment and a finance sentiment dictionary to gauge the investor sentiment exhibited in text data
- Optimized Markowitz's mean-variance portfolio model by adding constraints on investor sentiment

Projects

Project 1: Forecast of an exchange rate time series based on the ARIMA model (Individual)
Nankai University, Tianjin, China
Supervisor: Prof. Yongjin Wang
- Predicted a future exchange rate time series based on the ARIMA(2,1,2) model that closely resembled real-life scenarios
- Employed EViews and SPSS statistical packages to develop the model: conducted stability tests of time series, set parameters, and performed error analysis

Project 2: Interdisciplinary Contest in Modeling (Meritorious Winner) (Group work)
Nankai University, Tianjin, China
Supervisor: Prof. Gang Hu
- Participated in mathematical models construction and optimized several indexes of the food system model, the information of which is provided in the case illustration, and used LaTeX to compile the paper
- Utilized Python Seaborn and Pandas to process and visualize data previously generated by the model: constructed probability distribution diagrams and carried out a sensitivity analysis
- Ranked in the top 7% of all 26000 participating teams

Work Experience

Teaching Assistant for Engineering Statistics at UT-Austin   ***2022 Aug-Present***
- Led recitation sessions, prepared questions and solutions.
- Hold office hour, did grading for undergraduates

Teaching Assistant for Linear Algebra at NKU   ***2022 Feb-2022 Jun***
- Do grading and answer questions from students

Volunteer Experience

- Children's Village Education Support Program   2018 Sep-2019 Jun
- NKU's History Explanation Program   2018 Sep-2020 Jun
- Volunteer for the Centennial Anniversary of Nankai University   2019 Oct
- Shandong Province Education Support and Research Program   2019 Jul-2019 Aug

Language & Skills

English Proficiency: TOEFL 100, GRE 320, Pass International Teaching Assistant Assessment
Programming Languages: Python, R, LaTex