

# 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
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## Academic Researches

### **Research 1: Designing Electricity Vehicle Charging Infrastructure To Enable Disaster Evacuation**

*Research Assistant, University of Texas at Austin, Austin, USA*

*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 20 different scenarios for wild fire case study and do sensitivity analysis

### **Research 2: Weekly Schedule for Train Engineers**

*Master Thesis, University of Texas at Austin, Austin, USA (present)*

*Supervisor: Prof. Jonathan F. Bard*

- Build MIP model to solve the real world train engineers scheduling problem with one home base
- Use Cplex to solve the mixed integer programming

### **Research 3: 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

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## Projects

### **Project 1: 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

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## 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 senior undergraduates

**Teaching Assistant for Engineering Finance at UT-Austin**

**2023 Aug-2023 Sep**

- Hold office hour, did grading for senior undergraduates

**Teaching Assistant for Linear Algebra at NKU**

**2022 Feb-2022 Jun**

- Do grading and answer questions from students

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## Volunteer Experience

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|---|-------------------|
| - 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 |

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## Language & Skills

**English Proficiency:** TOEFL 104, GRE 320, Pass International Teaching Assistant Assessment

**Programming Languages:** Python, R, LaTeX