

# Rui Li (黎睿)

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I am Rui Li, an undergraduate student in the [Special Pilot Class in Mathematics and Economics](#) at Renmin University of China. This unique program provides an interdisciplinary curriculum spanning mathematics, economics, and computer science. Over my three years in the program, I have discovered that I excel in and feel passionate about fields that integrate mathematics, such as machine learning and game theory. In contrast, I do not demonstrate the same level of skill or interest in less technical areas like political economy. Given this self-assessment, I aim to pursue a program aligned with my strengths and interests in mathematical and technical disciplines. This will allow me to build on my proven skills in these energizing subjects.

## 🎓 Education

2023.05	<b>Renmin University of China</b> · Special Pilot Class in Mathematics and Economics
2020.09	GPA: 3.69 / 4.00 · Rank: 30% (overall); GPA: 3.84 / 4.00 · Rank: 1% (Mathematics)

## 🔗 Research Experience

<b>Asset Pricing via Machine Learning</b>	<b>Personal project</b>	2023.03 – 2023.06
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**Advisor: Lei Ge**

Machine learning

- Developed machine learning models for stock return prediction, including Lasso, LightGBM and NN
- Compiled dataset from WRDS and public sources covering 6000+ stocks and 60+ financial metrics
- Constructed rolling window training and hyperparameter tuning to adapt models over time

Ranked as an **exemplary project** by RUC's Big Data and AI Platform

<b>Customized Blockchain System for Inter-Organizational Processes</b>	<b>Research Assistant</b>	2022.09 – 2023.07
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**Advisor: Puwei Wang**

Inter-Organizational Processes, Customized Blockchain System

- Designed and implemented a high-performance blockchain system for business processes, improving throughput by 2.7x
- Customized process engine to run via endorsement-consensus-commit procedure on blockchain
- Realized reliable interactions between blockchain processes and external services

Published paper awarded **Best Paper** at IEEE ICWS 2023

<b>Electoral College versus Popular Vote</b>	<b>Research Assistant</b>	2022.09 – 2023.07
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**Advisor: Zijia Wang**

Game theory, Contest theory

- Developed a stylized game theory model comparing electoral college and popular vote
- Derived theoretical results on probability of winning, campaign expenditures, and inversion rates
- Proved electoral college leads to higher probability of winning and lower inversion rate
- Showed a cutoff cost ratio exists where electoral college leads to higher spending below the cutoff and lower spending above

## 🏆 Award

<b>IEEE ICWS 2023</b>	<b>Best Paper Award</b>	2023.07
<b>National Undergraduate Training Program for Innovation and Entrepreneurship</b>		2023.04
<b>“Challenge Cup” National Contest</b>	<b>Third prize</b>	2022.12

## Publications

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Puwei Wang, Zhouxing Sun, **Rui Li**, Jinchuan Chen, Ping Gong, Xiaoyong Du, *An Efficient Customized Blockchain System for Inter-Organizational Processes*, **IEEE ICWS'23**

## Skill

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<b>Programming Languages</b>	Python, C/C++, R, Stata
<b>Frameworks</b>	PyTorch, Keras
<b>Tools</b>	Git, Latex, Markdown, Typst