

# RUI LI

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## EDUCATION

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**Renmin University of China**, Beijing, China 09/2020 – 06/2024 (expected)  
B.S. in Mathematics, GPA: 3.84/4, Rank: 1/19  
B.A. in Economics, GPA: 3.69/4, Rank: 6/19

## RESEARCH EXPERIENCE IN COMPUTER SCIENCE

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**An Efficient Customized Blockchain System for Inter-Organizational Processes** Beijing, China  
Research Assistant, Advisor: Prof. Puwei Wang 09/2022 – 04/2023

Area: Inter-Organizational Services, Customized Blockchain System

- Customize a process engine for executing the inter-organizational business processes via a blockchain-style
- Propose a blockchain-based approach for service registration, binding and invocation
- Design a lease-based concurrency control protocol to logically isolate transactions from each other when invoking the services simultaneously

**Maximizing Network Reliability with Limited Monitoring Resources** Beijing, China  
Research Assistant, Advisor: Prof. Puwei Wang 02/2023 – 06/2023

Area: Operations research, Service-oriented Computing

- Propose cross-axis time to estimate the overall system reliability at each monitoring point
- Propose an optimization model to maximize the overall system reliability .

## RESEARCH EXPERIENCE IN ECONOMICS

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**Electoral College versus Popular Vote** Beijing, China  
Research Assistant, Advisor: Prof. Zijia Wang 09/2022 – 01/2023

Area: Game theory, Contest theory

- Propose a stylized model of an election game with two candidates and multiple districts
- Compare *EC* and *PV* from the perspectives of winning chance, campaign expenditure, and inversion rate

## RELATED COURSES IN MATHEMATICS

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|--|------------------------------------|
| • Partial differential equation (93, Final:97) | • Functional analysis (94, Mid:97) |
| • Complex Analysis (90)                        | • Real Analysis (91)               |
| • Probability theory (97, Final:98)            | • Abstract Algebra (83)            |
| • Analysis I,II,III (94,91,91)                 | • Advanced Algebra I,II(82,90)     |

## SELECTED OPEN-SOURCE PROJECTS

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**Notes on Geometric Analysis on Graphs** 07/2023 – 08/2023

- A latex notes in the field of geometric analysis on the graph
- Cover following topics: spectral graph theory, partial differential equations on graphs and Ricci curvature on graphs

**Asset Pricing via Machine Learning** 03/2023 – 06/2023

Selected as an outstanding exemplary project by the Big Data and Artificial Intelligence Platform at Renmin University of China

- Initialized project with comprehensive functionality and high-quality software engineering standard
- Implemented advanced statistical models, including time series analysis and machine learning algorithms, to forecast stock returns and identify potential market trends
- Elucidated the causal mechanisms embedded within the models utilized in this project

SELECTED AWARDS

• IEEE ICWS Best Paper Award	2023
• National Undergraduate Training Program for Innovation and Entrepreneurship	2022
• Third prize, “Challenge Cup” National Contest	2022

PUBLICATIONS

• Puwei Wang, Zhouxing Sun, <b>Rui Li</b> , Jinchuan Chen*, Ping Gong, Xiaoyong Du, “An Efficient Customized Blockchain System for Inter-Organizational Processes,” <b>IEEE ICWS’23 Best Paper Award</b>
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SKILLS

**Programming Languages:** Python, C/C++, R, Stata  
**Frameworks:** PyTorch, Keras  
**Tools:** Git, L<sup>A</sup>T<sub>E</sub>X, Typst

LANGUAGE

**CET6:** 551