Guanyu Jin

CONTACT

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SUMMARY

PhD in mathematics with 4+ years of experience in conducting cutting-edge scientific research in robust optimization, risk theory and statistics. Proficient in Python and R programming. Keen to apply my expertise of data analysis, optimization, machine learning, and quantitative finance in a team-oriented environment.

SKILLS

- **Optimization**
  Robust Optimization, Stochastic Optimization, GUROBI, COIN-OR, CVXPY, IPOPT, MOSEK
- **Programming**
  Python, R
- **Quantitative Risk Management**
  VaR, CVaR, Model Risk, Copula, Delta-Hedging, Options Pricing
- **Econometrics**
  Linear Regression, PCA analysis, GMM, GLM
- **Machine Learning**
  Tensorflow, Pytorch, Regularization, Stochastic Gradient Descent

LANGUAGES

- English: Fluent
- Dutch: Fluent
- Chinese: Fluent

INTERESTS

- Brazillian Jiu-Jitsu, Wrestling, Judo
- Piano, Guitar, Karaoke
- Table Tennis

PROFESSIONAL EXPERIENCE

PhD Researcher
Jan 2021 - July 2025

Department of Actuarial Science, University of Amsterdam

- Developed and implemented state-of-the-art robust algorithm for solving stochastic optimization problems in risk modelling with model uncertainty, and applied it to portfolio optimization, inventory management, delta-hedging.
- Improved statistical error quantification methods for Monte Carlo approximation of stochastic optimization problems in risk modelling.
- Experienced with optimization packages GUROBI, MOSEK, COIN-OR, IPOPT, CVXPY.
- Presented research findings in top international scientific conference, such as SIAM Conference on Optimization, European Conference on Operations Research (EURO).
- Supervised master thesis with topics in time series forecasting, VaR and CVaR estimations, dependence modelling, risk premiums calculations for insurance.
- Responsible for teaching bachelor and master courses with subjects including linear regression, hypothesis testing, data preprocessing, PCA analysis, risk premium principles, risk orderings.

Machine Learning Research Intern
Jan 2020 - Oct 2020

Centrum Wiskunde & Informatica

- Developed efficient optimization algorithms to train reinforcement learning models, with the optimal exploration-exploitation trade-off.

EDUCATION

PhD Applied Mathematics, University of Amsterdam 2021 - 2025

- Under supervision of Prof. Roger J.A. Laeven and Prof. Dick den Hertog
- Visiting Researcher at Columbia University, New York, United States (March-April, 2024)
- Visiting Researcher at Technion, Haifa, Israel (April 2023)

Master Mathematics (cum laude), Leiden University 2018 - 2020

Bachelor Mathematics (cum laude), Leiden University 2015 - 2018

Propaedeutic Life Science & Technology (cum laude), Leiden University 2014 - 2015