

Guanghui Min

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EDUCATION

University of Virginia

Ph.D. in Computer Science

Charlottesville, VA

August 2024 - Now

- GPA: 3.88 (out of 4.0)
- Research Interests: LLM Post-training, Data Selection & Synthesis, Long-horizon Agents.
- Advisor: Dr. Chen Chen

University of Michigan, Ann Arbor

M.Sc. in Applied Statistics

Ann Arbor, MI

September 2018 - May 2020

- GPA: 3.88 (out of 4.0)
- Courses: Natural Language Processing, Analysis of Time Series, Survival Time Analysis, Bayesian Modeling.

Wuhan University

B.Sc. in Statistics

Wuhan, CN

September 2014 - June 2018

- GPA: 3.7 (out of 4.0) | Major GPA: 3.76 (out of 4.0) (Ranking: 6/47)
- Courses: Applied Regression Analysis, Multivariate Statistical Analysis, Stochastic Process, Nonparametric Statistics, Mathematical Statistics, Optimization Theory and Methods.

SELECTED PUBLICATIONS

Guanghui Min, Tianhao Huang, Ke Wan, Chen Chen. GIST: Targeted Data Selection for Instruction Tuning via Coupled Optimization Geometry. *Proceedings of the 43rd International Conference on Machine Learning. (ICML-26)*.

Guanghui Min, Tianhao Huang, Ke Wan, Qi R. Wang, Chen Chen. Bridging Dynamics and Data: A Unified Diffusion Framework for Mechanistically-Informed Epidemic Forecasting. *Proceedings of the 43rd International Conference on Machine Learning. (ICML-26)*.

Tianhao Huang, **Guanghui Min**, Zhenyu Lei, Aiying Zhang, Chen Chen. Uncovering Latent Communication Patterns in Brain Networks via Adaptive Flow Routing. *Proceedings of the 43rd International Conference on Machine Learning. (ICML-26)*.

Guanghui Min, Yinhan He, Chen Chen. Scaling Epidemic Inference on Contact Networks: Theory and Algorithms. *Proceedings of the 39th Annual Conference on Neural Information Processing Systems. (NeurIPS-25)*.

Yinhan He, Chen Chen, Song Wang, **Guanghui Min**, Jundong Li. Demystifying Epidemic Containment in Directed Networks: Theory and Algorithms. *Proceedings of the 18th ACM International Conference on Web Search and Data Mining. (WSDM-25)*.

EXPERIENCE

Nokia of America

AI Research & Development Intern | Manager: Dr. Liang Wu

Sunnyvale, CA

May 2026 – August 2026

- Investigating execution-aware context compression for long-horizon LLM agents, studying how compressed context affects task success, step efficiency, and redundant information reacquisition.
- Selecting representative tool-use trajectories from raw agent rollouts to support compressor training, failure diagnosis, and agent behavior analysis.
- Developing post-training workflows that optimize context compressors with downstream agent feedback, improving the trade-off among task success, step efficiency, and context usage.

Yinhua Fund Management Co., Ltd.

Senior Machine Learning Engineer, Innovation Center

Beijing, CN

May 2020 - July 2024

- Developed machine learning workflows for investment research and portfolio analysis, including time-series clustering for market regime modeling and graph-based methods for portfolio diversification and risk reduction.
- Applied LLMs and generative models to investment research and wealth management scenarios, exploring parameter-efficient adaptation methods such as LoRA and P-tuning.
- Built internal research-system modules for active equity analysis, including simulated portfolios, periodic reports, and data-driven workflow automation.

Yinhua Fund Management Co., Ltd.

Beijing, CN

- Built quantitative research workflows for factor testing, multi-factor modeling, and portfolio attribution.
- Developed a Rasa-based investment research chatbot using BERT-Chinese-Large for intent classification and DIET for entity extraction.

PROJECTS

Asset Allocation using Regime-switching Hidden Markov Method

Beijing, CN

Innovation center, Yinhua Fund Management Co., Ltd

October 2020 – December 2020

- Developed a regime-switching Hidden Markov Model for asset rotation analysis across equities, bonds, and gold.
- Combined time-series clustering, cross-validation-based regime selection, and risk-parity allocation to build a live-tested portfolio with 4.2% recent excess return over the benchmark.

Coupled Mixed Model for Joint Genetic Analysis of Complex Disorders from Independently Collected Data Sets: Application to Alzheimer's Disease and Substance Use Disorder

Pittsburgh, PA

Research Intern, Carnegie Mellon University | Mentor: Dr. Haohan Wang

July 2017 – August 2017

- Developed a Bayesian mixed model for jointly analyzing correlated phenotypes from independently collected datasets with missing covariates.
- Optimized the model with ADMM and block-coordinate updates, improving SNP identification performance over baseline linear mixed models measured by auROC.

ACADEMIC AWARDS

- NeurIPS Scholar Award, 2025
- UVA Computer Science Scholarship, 2024
- Wuhan University Third-Class Scholarship (top 15%), *statistics*, 2016, 2017, 2018
- Wuhan University Second-Class Scholarship (top 10%), *fundamental mathematics*, 2015
- Wuhan University Freshman Scholarship, *fundamental mathematics*, 2014

CERTIFICATES AND HONORS

CFA (Chartered Financial Analyst) Level III Candidate

- Level II Passed Date: May 2023

Coursera Course Certificates

- Decision Making and Reinforcement Learning | Columbia University | December 2023
- Generative AI with Large Language Models | deeplearning.ai, AWS | August 2023

MCM Competition (Mathematical Contest in Modeling)

- Thesis: The effect of self-driving cars on the traffic flow in the bottleneck model.
- Honorable Mention | April 2017

Skills

Programming: Python, R, MySQL, Oracle, Redis

ML/LLM: PyTorch, Transformers, Hugging Face, LoRA, Rasa, scikit-learn, TensorFlow

Research: LLM post-training, data selection, long-horizon agents, tool-use trajectory analysis, time-series modeling