

RESEARCH INTERESTS My research focuses on developing **interpretable machine learning** algorithms and pipelines to facilitate human-model interaction for high-stakes decision-making problems. I have solved fundamental problems in interpretable machine learning, allowing very simple models to achieve performance comparable with that of black boxes in a very fast and scalable way. I have introduced **a new paradigm for machine learning**, called **learning Rashomon sets**, to break the interaction bottleneck between users and machine learning algorithms by finding and storing *all* models within ϵ of the optimal loss.

ACADEMIC POSITION **University of North Carolina at Chapel Hill** Chapel Hill, NC
Assistant Professor Start July 2024
School of Data Science and Society
Department of Statistics and Operations Research

EDUCATION **Duke University** Durham, NC
Ph.D. in Computer Science (Advisor: Cynthia Rudin) 2020 – 2024
M.S. in Statistical Science 2018 – 2020
University of North Carolina at Chapel Hill Chapel Hill, NC
B.S. in Statistics and Information Science 2014 – 2018

SELECTED AWARDS **Second Place, Bell Labs Prize**, 2023
The Bell Labs Prize is an international competition to solicit game changing and impactful ideas that have the potential to change the way people live, work, and communicate with each other. Among 107 proposals received in 2023, our team won the second place in the Bell Labs Prize.
Rising Stars in Data Science, University of Chicago, 2023
Outstanding Ph.D. Preliminary Research Award, Duke Computer Science, 2023
Finalist, Data Mining Best Student Paper Award, INFORMS, 2022

PUBLICATIONS (* indicates co-first authors, equal contribution)

- [1] Cynthia Rudin, **Chudi Zhong**, Lesia Semenova, Margo Seltzer, Ronald Parr, Jiachang Liu, Srikar Katta, Jon Donnelly, Harry Chen, Zachery Boner. The Amazing Things that Come From Having Many Good Models. In *International Conference on Machine Learning (ICML)*, 2024. (**Spotlight**)
- [2] **Chudi Zhong***, Zhi Chen*, Jiachang Liu, Margo Seltzer, Cynthia Rudin. Exploring and Interacting with the Set of Good Sparse Generalized Additive Models. In *Advances in Neural Information Processing Systems (NeurIPS)*, 2023.
- [3] Jiachang Liu, Sam Rosen, **Chudi Zhong**, Cynthia Rudin. OKRidge: Scalable Optimal k-Sparse Ridge Regression for Learning Dynamical Systems. In *Advances in Neural Information Processing Systems (NeurIPS)*, 2023. (**Spotlight**)
- [4] Rui Xin*, **Chudi Zhong***, Zhi Chen*, Takuya Takagi, Margo Seltzer, Cynthia Rudin. Exploring the Whole Rashomon Set of Sparse Decision Trees. In *Advances in Neural Information Processing Systems (NeurIPS)*, 2022. (**Oral**)
- **Finalist, Data Mining Best Student Paper Award, INFORMS, 2022**

- [5] Jiachang Liu*, **Chudi Zhong***, Boxuan Li, Margo Seltzer, Cynthia Rudin. FasterRisk: Fast and Accurate Interpretable Risk Scores. In *Advances in Neural Information Processing Systems (NeurIPS)*, 2022.
- [6] Zijie Wang, **Chudi Zhong**, Rui Xin, Takuya Takagi, Zhi Chen, Duen Horng Chau, Cynthia Rudin, Margo Seltzer. TimberTrek: Exploring and Curating Trustworthy Decision Trees with Interactive Visualization. In *IEEE Visualization and Visual Analytics (VIS)*, 2022.
- [7] Jiachang Liu, **Chudi Zhong**, Margo Seltzer, Cynthia Rudin. Fast Sparse Classification for Generalized Linear and Additive Models. In *Proceedings of Machine Learning Research (AISTATS)*, 2022.
- [8] Hayden McTavish*, **Chudi Zhong***, Reto Achermann, Ilias Karimalis, Jacques Chen, Cynthia Rudin, Margo Seltzer. Fast Sparse Decision Tree Optimization via Reference Ensembles. In *AAAI Conference on Artificial Intelligence (AAAI)*, 2022.
- [9] Cynthia Rudin, Chaofan Chen, Zhi Chen, Haiyang Huang, Lesia Semenova, **Chudi Zhong**. Interpretable Machine Learning: Fundamental Principals and 10 Grand Challenges. *Statistics Surveys*, 2022.
- [10] Jimmy Lin*, **Chudi Zhong***, Diane Hu, Cynthia Rudin, Margo Seltzer. Generalized and Scalable Optimal Sparse Decision Trees. In *International Conference on Machine Learning (ICML)*, 2020.

INVITED	School of Business, Purdue University,	2024
TALKS	School of Information Sciences Colloquium, UIUC	2024
	ASSET Seminar, University of Pennsylvania	2024
	Statistics and Operations Research Colloquium, UNC-Chapel Hill	2024
	Computer Science and Philosophy AI Workshop, UNC-Chapel Hill	2023
	Rising Stars in Data Science, University of Chicago	2023
	Tippie College of Business, University of Iowa	2023
	INFORMS Annual Meeting	2023
	Cornell ORIE Young Researcher Workshop (poster)	2023
	Publisher-centric Science Talks, Amazon	2023
	Interpretability in AI Workshop, Banff International Research Station	2022
	INFORMS Annual Meeting	2021

SERVICES **Organizer**, “Making Models We Can Understand: An Interactive Introduction to Interpretable Machine Learning”, International Conference on Computational Social Science, 2024

Chair, “Advancing Interpretable Machine Learning: Novel Approaches and Applications”, INFORMS Annual Meeting, 2023

Reviewer, AISTATS 2021, 2022, 2023, ICML 2022, COLT 2023, NeurIPS 2023, 2024, Annals of Applied Statistics (AOAS), Data Mining and Knowledge Discovery (DMKD)

Co-leader, “Artificial Intelligence for art and fun”, FEMMES+ Capstone, 2021

The capstone event of FEMMES+ (Females and Allies Excelling More in Math, Engineering, and Science) is a one-day outreach program introducing young students (4th through 6th grade) to math, science, and engineering.

TEACHING	TA, COMPSCI 671D, Machine Learning	Fall 2022
	TA, COMPSCI 527, Computer Vision	Spring 2022
	TA, STA 663L, Statistical Computation	Spring 2020

MENTORING Panyu Chen, master student, Duke University
Rui Xin, undergraduate, Duke University (now PhD student at University of Washington)
Boxuan Li, undergraduate, Duke University (now PhD student at Columbia University)
Diane Hu, undergraduate, Duke University (now working in industry)
Academic Mentor of 14 Duke student-athletes 2018 – 2019