Zixin Zhong

Ph.D. Candidate Department of Mathematics, National University of Singapore

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Research Interests

Machine learning (e.g., bandit problem)

Work Experience

Jun. 2021 to present	Research fellow, Department of Electrical and Computer Engineering
	National University of Singapore (NUS)
	· Supervisors: Prof. Vincent Y. F. Tan and Prof. Wang Chi Cheung

Education

Aug. 2017 to present	Ph.D. candidate, Department of Mathematics National University of Singapore (NUS) · Supervisors: Prof. Vincent Y. F. Tan (Main) and Prof. Wang Chi Cheung
Aug. 2013 to Jun. 2017	B.S., School of Mathematics (Outstanding Graduate) Sun Yat-sen University (SYSU), GPA: 4.1/5.0 · Thesis Advisor: Prof. Guocan Feng
Aug. 2015 to Dec. 2015	International student University of California, Berkeley (UCB)
Nov. 2014 to Jun. 2017	Yat-sen School (Including top 5% from School of Mathematics) Sun Yat-sen University (SYSU)

Preprints

On the Pareto Frontier of Regret Minimization and Best Arm Identification in Stochastic Bandits
 Zixin Zhong, Wang Chi Cheung, and Vincent Y. F. Tan
 Submitted, October 2021

Journal Papers

• Thompson Sampling Algorithms for Cascading Bandits [Code]

Zixin Zhong, Wang Chi Cheung, and Vincent Y. F. Tan

Journal of Machine Learning Research (JMLR), Vol. 22, No. 218, Pages 1 - 66, September 2021

Conference Proceedings

• Probabilistic Sequential Shrinking: A Best Arm Identification Algorithm for Stochastic Bandits with Corruptions [Code]

Zixin Zhong, Wang Chi Cheung, and Vincent Y. F. Tan

International Conference on Machine Learning (ICML), Virtual, July 2021

Best Arm Identification for Cascading Bandits in the Fixed Confidence Setting

Zixin Zhong, Wang Chi Cheung, and Vincent Y. F. Tan

International Conference on Machine Learning (ICML), Virtual, July 2020

• A Thompson Sampling Algorithm for Cascading Bandits (oral presentation)

Wang Chi Cheung, Vincent Y. F. Tan, and Zixin Zhong

International Conference on Artificial Intelligence and Statistics (AISTATS), Naha, Okinawa, Japan, April 2019

Professional Activities

- Reviewer of International Conference on Artificial Intelligence and Statistics (AISTATS), 2022
- Reviewer of International Conference on Learning Representations (ICLR), 2022
- Reviewer of Neural Information Processing Systems (NeurIPS), 2021
- Reviewer of International Conference on Artificial Intelligence and Statistics (AISTATS), 2021
- Reviewer of IEEE Transactions on Information Theory

Academic Activities

- INFORMS 2021 Annual Meeting, Virtual, 24-27 October 2021 Oral presentation of the work appeared at ICML 2021
- The 22nd Conference of the International Federation of Operational Research Societies (IFORS), Virtual, 23-27 August 2021

Oral presentation of the work appeared at ICML 2021

- The 3rd TBSI Workshop on Learning Theory (WOLT), TBSI, 5-7 July 2021 Oral and poster presentation of the work appeared at ICML 2021
- Analytics for X, iORA, NUS, 19-21 May 2021
 Oral presentation of the work appeared at ICML 2021

Internship

Nov. 2020 to Mar. 2021 Data scientist

AiDA Thchnologies Pte Ltd, Singapore

- · Reporting officers: Dr. Tan Geok Leng (CEO), Dr. Zha Wei
- **Insurance upsell/cross sell**. Developing a predictive analytics model for identifying candidates who have a propensity to buy insurance products from a bank's existing CASA customer base.
- **PIER71 Smart Port Challenge**. Developing a machine learning model to predict the Estimated Time of Arrival (ETA) for vessels plying between two known port pairs which achieves 1.34% percentage error. Analyzing the limitations of the model so developed.
- **Trading Floor Misconduct**. Developing a framework for text mining using Regular Expression to conduct experiments to lockdown parameters so that Risk Events may be detected with low False Alarm rates. The framework is now used as a **standard tool** in the company.

Honors & Rewards

Aug. 2017 to Jun. 2021 NUS Research Scholarship

2014 National Merit Scholarship, China

2014, 2015 First Class Scholarship, SYSU

Skills

Computer: Python, Matlab, Latex, R, C/C++ **Language:** English, Mandarin, Cantonese