

YIHAN DU

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EDUCATION

Tsinghua University

September 2018 - June 2023 (expected)

Institute for Interdisciplinary Information Sciences (headed by Prof. Andrew Chi-Chih Yao)

Ph.D. candidate in Computer Science

Advisor: Prof. Longbo Huang

Research interests: machine learning, with emphases on online learning (multi-armed bandit), reinforcement learning, representation learning and meta learning

Xiamen University

September 2014 - June 2018

B.E. in Computer Science

Rank: 3/93

VISIT & INTERNSHIP

Cornell University

September 2022 - December 2022

Visiting Ph.D. student

Research topic: reinforcement learning

Supervisor: Prof. Wen Sun

Microsoft Research (MSR) Asia

January 2020 - May 2020

Research intern

Research topic: combinatorial bandit

Supervisor: Dr. Wei Chen (IEEE Fellow, Director of MSR Asia Theory Center)

PUBLICATIONS

Yihan Du, Siwei Wang, Longbo Huang, “Provably Efficient Risk-Sensitive Reinforcement Learning: Iterated CVaR and Worst Path,” International Conference on Learning Representations (ICLR), 2023.

Yihan Du, Wei Chen, Yuko Kuroki, Longbo Huang, “Collaborative Pure Exploration in Kernel Bandit,” International Conference on Learning Representations (ICLR), 2023.

Yihan Du, Wei Chen, “Branching Reinforcement Learning,” International Conference on Machine Learning (ICML), 2022.

Yihan Du, Siwei Wang, Zhixuan Fang, Longbo Huang, “Continuous Mean-Covariance Bandits,” Proceedings of the Conference on Neural Information Processing Systems (NeurIPS), 2021.

Yihan Du, Yuko Kuroki, Wei Chen, “Combinatorial Pure Exploration with Bottleneck Reward Function,” Proceedings of the Conference on Neural Information Processing Systems (NeurIPS), 2021.

Yihan Du, Siwei Wang, Longbo Huang, “A One-Size-Fits-All Solution to Conservative Bandit Problems,” Proceedings of the AAAI Conference on Artificial Intelligence (AAAI), 2021.

Yihan Du*, Yuko Kuroki*, Wei Chen, “Combinatorial Pure Exploration with Full-Bandit or Partial Linear Feedback,” Proceedings of the AAAI Conference on Artificial Intelligence (AAAI), 2021 (*equal contribution).

(* α - β ordering) Wei Chen, **Yihan Du**, Longbo Huang, Haoyu Zhao, “Combinatorial Pure Exploration for Dueling Bandit,” International Conference on Machine Learning (ICML), 2020.

Yihan Du, Siwei Wang, Longbo Huang, “Dueling Bandits: From Two-dueling to Multi-dueling,” Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS), 2020.

Yihan Du, Yan Yan, Si Chen, Yang Hua, “Object-adaptive LSTM Network for Real-time Visual Tracking with Adversarial Data Augmentation,” Neurocomputing, 2019.

Yihan Du, Yan Yan, Si Chen, Yang Hua, Hanzi Wang, “Object-adaptive LSTM Network for Visual Tracking,” International Conference on Pattern Recognition (ICPR), 2018.

PREPRINTS

Yihan Du, Longbo Huang, Wen Sun, “Multi-task Representation Learning for Pure Exploration in Linear Bandits,” Preprint, 2023.

INVITED TALKS & PRESENTATIONS

Invited Talks

“Optimal Experimental Design in Linear Bandit,” Bandit Algorithm Seminar, Yau Mathematical Sciences Center (YMSC), Tsinghua University *November 2022*

“Combinatorial Pure Exploration for Dueling Bandit,” China Computer Federation (CCF) Doctoral Forum in Theoretical Computer Science (only 18 Ph.D. students in theoretical computer science are invited nationwide) *June 2021*

Presentations

ICML 2022, NeurIPS 2021, AAAI 2021, ICML 2020, AAMAS 2020

ACADEMIC SERVICE & ACTIVITIES

Program Committee Member/Reviewer

Conference: ICML 2021-2023, ICLR 2022-2023, NeurIPS 2021-2022

Journal: Transactions on Machine Learning Research (TMLR)

Teaching Assistant

Stochastic Network Optimization, graduate course (IIS, Tsinghua University) *Spring 2021*

Introduction to Computer Science, undergraduate course (Yao Class, Tsinghua University) *Fall 2019*

Social Activity

President of Graduate Union at IIS, Tsinghua University *June 2020 - June 2021*

AWARDS & SCHOLARSHIPS

China National Scholarship, by Ministry of Education of China (the only recipient among CS Ph.D. students at IIS, Tsinghua University in 2022) *October 2022*

Toyota Scholarship, by Toyota and Tsinghua University *October 2021*

Huawei Academic Excellence Scholarship, by Huawei and Tsinghua University *October 2020*

Wuqing Talent Scholarship, by Wuqing District Government and Tsinghua University *October 2020*

Outstanding Graduate, by Xiamen University *June 2018*

Academic Excellence Scholarship, by Xiamen University *October 2017, 2015*

Tan Chong International Scholarship, by Tan Chong International Limited and Xiamen University *April 2016*

Dean’s List in School of Informatics, by Xiamen University *October 2016 - 2018*