

# ZINIU LI

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## EDUCATION

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**The Chinese University of Hong Kong, Shenzhen**, Shenzhen, China      August 2020 - Present  
Ph.D., School of Data Science.  
Advisor: Zhi-Quan (Tom) Luo.

**Xi'an Jiaotong University**, Xi'an, China      August 2015 - June 2019  
B.E., School of Electrical Engineering.  
Advisor: Zhiyuan Liu.

## RESEARCH INTERESTS

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Reinforcement learning, optimization and learning theory.

## WORK EXPERIENCE

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**Tencent**, Shenzhen, China      October 2021 - Present  
CUHKSZ-Tencent AI Lab Joint PhD Program

**Cardinal Operations**, Shanghai, China      June 2020 - August 2020  
Software Engineer (Intern)

**Nanjing University**, Nanjing, China      July 2019 - June 2020  
Research Assistant, Advisor: Yang Yu

**Tianrang Technology Inc.**, Hangzhou, China      December 2018 - February 2019  
Research Intern, Advisor: Zhenhui (Jessie) Li

## PUBLICATIONS

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\* indicates equal contribution.

- **Ziniu Li\***, Tian Xu\*, Yang Yu, Zhi-Quan Luo. Rethinking ValueDice: Does It Really Improve Performance? *In Proceedings of the 10th International Conference on Learning Representations (ICLR) (Blog Track)*, 2022.
- **Ziniu Li**, Yingru Li, Yushun Zhang, Tong Zhang, Zhi-Quan Luo. HyperDQN: A Randomized Exploration Method for Deep Reinforcement Learning. *In Proceedings of the 10th International Conference on Learning Representations (ICLR)*, 2022.

This paper also appears in Workshop on Ecological Theory of Reinforcement Learning at NeurIPS (**Oral**), 2021.

- Tian Xu, **Ziniu Li**, Yang Yu. Error Bounds of Imitating Policies and Environments for Reinforcement Learning. *To appear in IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, 2021.
- Tian Xu, **Ziniu Li**, Yang Yu. Error Bounds of Imitating Policies and Environments. *In Advances in Neural Information Processing Systems 33 (NeurIPS)*, 2020.
- **Ziniu Li\***, Xiong-Hui Chen\*. Efficient Exploration By Novelty-Pursuit. *In Proceedings of the 2nd International Conference on Distributed Artificial Intelligence (DAI)*, 2020.

- Fei-yu Liu, **Ziniu Li**, Chao Qian. Self-Guided Evolution Strategies with Historical Estimated Gradients. *In Proceedings of the 29th International Conference on Joint Artificial Intelligence (IJCAI)*, 2020.
- Xinjian Huang, **Ziniu Li**, Zhiyuan Liu, Bin Xiang, Yingsan Geng, Jianhua Wang. Solving The Inverse Design Problem of Electrical Fuse with Machine Learning. *IEEE Access*, 8 (2020): 74137-74144, 2020.

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## MANUSCRIPTS

\* indicates equal contribution.

- **Ziniu Li**\*, Tian Xu\*, Yang Yu. A Note on Target Q-learning For Finite MDPs with a Generative Oracle. *arXiv*: 2203.11489, 2022.
- Tian Xu\*, **Ziniu Li**\*, Yang Yu, Zhi-Quan Luo. On Generalization of Adversarial Imitation Learning and Beyond. *arXiv*: 2106.10424, 2021.
- Tian Xu, **Ziniu Li**, Yang Yu. On Value Discrepancy of Imitation Learning. *arXiv*: 1911.07027, 2019.

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## PROJECTS

**RLX - Reinforcement Learning Algorithm Codebase** March 2020

Implemented comprehensive cutting-edge deep reinforcement learning algorithms using TensorFlow with easy and convenient interfaces.

**Face Recognition System on NVIDIA TX2** June 2018

Developed a facial recognition system capable of detecting strangers in real-time and displaying detection information on the NVIDIA TX2 (Linux platform).

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## SERVICE

- Organizers: Reinforcement Learning Weekly Seminar, Deep Learning Seminar at CUHKSZ.
- Reviewer: ICML'2022, ICLR'2022, DAI'2020.

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## AWARDS

- Best paper presentation award at the Doctoral and Postdoctoral Forum of Shenzhen Research Institute of Big Data (SRIBD), 2021.
- Honor student of Xi'an Jiaotong University, 2017.
- Second prize of National Electrical Math Modeling Competition, 2017.
- Second prize of Chinese Mathematics Competition, Shaanxi Province, 2016.