Kang **Xu**

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Education

Fudan University — *Shanghai, China*

M.S. in Computer Application Technology — *Sep. 2021 - Present*

- Advised by Wei Li; GPA: 3.33/4.

Donghua University — *Shanghai, China*

B.S. in Automation — *Seq. 2017 - Jun. 2021*

- GPA: 4.25/5, Rank: 2/131.

Research Interest

I am broadly interested in research on **Reinforcement Learning**, and my current research interest mainly focuses on:

- *Generalization & Adaptation* (Cross-Dynamics/Rewards/Embodiment; Meta RL; Robustness; RL Pre-training)
- *Learning with Prior Knowledge* (Learning from Demonstration; Offline-Online; Policy/Primitive/Skill Reuse)
- *Human-in-the-Loop* (Task Specification with Preferences / Symbolic Representation / Language Instruction)

Publications & Preprints

Cross-Domain Policy Adaptation via Value-Guided Data Filtering [paper] — **Poster**

Neural Information Processing Systems (NeurIPS) — *2023*

- Kang Xu, Chenjia Bai, Xiaoteng Ma, Dong Wang, Bin Zhao, Zhen Wang, Xuelong Li, Wei Li

Diffusion Model is an Effective Planner and Data Synthesizer for Multi-Task Reinforcement Learning [paper] — **Poster**

Neural Information Processing Systems (NeurIPS) — *2023*

- Haoran He, Chenjia Bai, Kang Xu, Zhuoran Yang, Weinan Zhang, Zhen Wang, Bin Zhao, Xuelong Li

On the Value of Myopic Behavior in Policy Reuse [paper] — *Preprint*

arXiv preprint, under review — *2023*

- Kang Xu, Chenjia Bai, Shuang Qiu, Haoran He, Bin Zhao, Zhen Wang, Wei Li, Xuelong Li

Open-Ended Diverse Solution Discovery with Regulated Behavior Patterns for Cross-Domain Adaptation [paper] — **Oral**

Association for the Advancement of Artificial Intelligence (AAAI) — *2023*

- Kang Xu, Yan Ma, Bingsheng Wei, Wei Li

Quantification before Selection: Active Dynamics Preference for Robust Reinforcement Learning [paper] — *Preprint*

arXiv preprint — *2022*

- Kang Xu, Yan Ma, Wei Li

Dynamics-aware novelty search with behavior repulsion [paper] — **Poster**

Genetic and Evolutionary Computation Conference (GECCO) — *2022*

- Kang Xu, Yan Ma, Wei Li

Evolutionary Action Selection for Gradient-Based Policy Learning [paper] — **Oral**

International Conference on Neural Information Processing (ICONIP) — *2022*

- Yan Ma, Tianxing Liu, Bingsheng Wei, Yi Liu, Kang Xu, Wei Li

Work Experience

Shanghai Artificial Intelligence Laboratory — *Shanghai, China*

Research Intern — *Nov. 2022 - Present*

- Research on Reinforcement Learning. Mentored by Chenjia Bai.

Netease Leihuo - Fuxi Tech - Game AI *Hangzhou, China*

Algorithm Engineer Intern *Jun. 2021 - Aug. 2021*

- **Doudizhu AI Implementation.** Embed the existing SOTA Doudizhu AI "Douzero" to the internal Reinforcement Learning platform RLEase, and refine "Douzero" from the perspectives of feature engineering and model architecture. Develop novel algorithms that improve the credit assignment mechanism. The developed agent was once ranked in the top 10 out of over four hundred bots on the botzone gaming platform.
- **Implementation of General Card Game Simulator.** Developed a general card game simulation framework whose game rules, number of players, and cards are customizable for training RL strategies of various card games.

Honors & Awards

2018	National Scholarship (1%)	*Shanghai, China*
2019	National Scholarship (1%)	*Shanghai, China*
2018	Donghua University Scholarship (5%)	*Donghua Univerisity*
2019	Donghua University Scholarship (5%)	*Donghua Univerisity*
2020	Donghua University Scholarship (5%)	*Donghua Univerisity*
2021	Shanghai Outstanding Graduates	*Shanghai, China*
2019	Tongqi Innovation and Entrepreneurship Scholarship	*Shanghai, China*
2019	2nd Prize, National University Students Intelligent Car Race Competition National	*Shandong, China*
2019	1st Prize, National Undergraduate Electronics Design Contest (Shanghai)	*Shanghai, China*
2019	Honorable Mention, Mathematical Contest In Modeling	*Shanghai, China*
2020	Huawei Scholarship	*Shanghai, China*