

Qingfeng Lan

Curriculum Vitae

University of Alberta
Edmonton, Alberta, Canada

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📄 <https://lancelqf.github.io/>

I'm a PhD student at the University of Alberta, Canada. I'm interested in designing simple and efficient algorithms supported by sound theories and verified by rigorous experiments. In particular, my research focuses on continual reinforcement learning and representation learning.

Education

- 2020 - Present **Doctor of Philosophy in Computing Science**, *University of Alberta*, Canada.
Advisor A. Rupam Mahmood
- 2018 - 2020 **Master of Science in Computing Science**, *University of Alberta*, Canada.
Advisor Alona Fyshe
- 2014 - 2018 **Bachelor of Engineering in Computer Science and Technology**, *University of Chinese Academy of Sciences*, China.
Advisor Yanyan Lan (thesis advisor), Guojie Li (tutor)
- 17.10 - 18.03 **Visiting Non-Matriculated Programme**, *University of Oxford*, England.
Tutor Leslie Ann Goldberg

Employment

- 22.07 - 23.01 **Research Intern**, *Sea AI Lab*, Singapore.
Collaborator Zhongwen Xu, Shuicheng Yan
- 22.01 - 22.06 **Associate Researcher**, *Huawei Noah's Ark Lab*, Edmonton, Canada.
Collaborator Yangchen Pan, Jun Luo
- 17.07 - 18.04 **Research Assistant**, *Key Laboratory of Network Data Science and Technology*, *Chinese Academy of Sciences*, Beijing, China.
Collaborator Yixing Fan, Yanyan Lan, Jiafeng Guo

Publications

Refereed Articles

- TMLR-2023 **Memory-efficient Reinforcement Learning with Value-based Knowledge Consolidation.**
Qingfeng Lan, Yangchen Pan, Jun Luo, A. Rupam Mahmood. *Transactions on Machine Learning Research*, 2023. [\[Link\]](#)
- AISTATS-2022 **Model-free Policy Learning with Reward Gradients.**
Qingfeng Lan, Samuele Tosatto, Homayoon Farrahi, A. Rupam Mahmood. *International Conference on Artificial Intelligence and Statistics*, 2022. **Poster.** [\[Link\]](#)

- ICLR-2020 **Maxmin Q-learning: Controlling the Estimation Bias of Q-learning.**
Qingfeng Lan, Yangchen Pan, Alona Fyshe, Martha White. *International Conference on Learning Representations, 2020*. **Poster**. [\[Link\]](#)
- CCIR-2018 **A Deep Top-K Relevance Matching Model for Ad-hoc Retrieval.**
 Zhou Yang, **Qingfeng Lan**, Jiafeng Guo, Yixing Fan, Xiaofei Zhu, Yanyan Lan and Yue Wang, Xueqi Cheng. *China Conference on Information Retrieval, 2018*. **Best Paper Award Candidate**. [\[Link\]](#)
- Non-Refereed Articles**
- arXiv Preprint **Learning to Optimize for Reinforcement Learning.**
Qingfeng Lan, A. Rupam Mahmood, Shuicheng Yan, Zhongwen Xu. *arXiv preprint arXiv:2302.01470, 2023*. [\[Link\]](#)
- arXiv Preprint **Predictive Representation Learning for Language Modeling.**
Qingfeng Lan, Luke Kumar, Martha White, Alona Fyshe. *arXiv preprint arXiv:2105.14214, 2021*. [\[Link\]](#)
- arXiv Preprint **Variational Quantum Soft Actor-Critic.**
Qingfeng Lan. *arXiv preprint arXiv:2112.11921, 2021*. [\[Link\]](#)
- NeurIPS-2019 **Reducing Selection Bias in Counterfactual Reasoning for Individual Treatment Effects Estimation.**
 Zichen Zhang, **Qingfeng Lan**, Lei Ding, Yue Wang, Negar Hassanpour, Russell Greiner. *NeurIPS Workshop on Causal Machine Learning, 2019*. **Poster Spotlight**. [\[Link\]](#)

Academic Services

Reviewer JMLR 2020, NeurIPS 2022, ICLR 2023, AISTATS 2023, CoLLAs 2023.

Open-Source Code

[Optim4RL](#).

A framework of learning to optimize for reinforcement learning.

[Explorer](#).

A reinforcement learning frame based on Pytorch for exploring new ideas.

[Gym Games](#).

A gym compatible version of various games for reinforcement learning.

[Quantum Explorer](#).

A quantum reinforcement learning framework for exploring new ideas, based on PyTorch and PennyLane.

Teaching Experience

Winter 2019 **Teaching Assistant**, *University of Alberta*, Edmonton, Canada.
 CMPUT 175: Introduction to the Foundations of Computation II

Fall 2018 **Teaching Assistant**, *University of Alberta*, Edmonton, Canada.
 CMPUT 174: Introduction to the Foundations of Computation I

Computer skills

Advanced Python, PyTorch, Jax

Intermediate C

Basic PennyLane, Octave/MATLAB, Verilog, Haskell