

# 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 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.  
Advisors Yanyan Lan (thesis advisor), Guojie Li (tutor)
- 17.10 - 18.03 **Visiting Non-Matriculated Programme**, *University of Oxford*, England.  
Tutor Leslie Ann Goldberg

### Employment

- 22.01 - 22.06 **Associate Researcher**, *Noah's Ark Lab, Huawei*, Edmonton, Canada.
- 17.07 - 18.04 **Research Assistant**, *Key Laboratory of Network Data Science and Technology, Chinese Academy of Sciences*, Beijing, China.

### Publications

#### Refereed Articles

- 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.*
- 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.*
- 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.*

#### Non-Refereed Articles

- In Submission **Memory-efficient Reinforcement Learning with Knowledge Consolidation.**  
Qingfeng Lan, Yangchen Pan, Jun Luo, A. Rupam Mahmood. *arXiv preprint arXiv:2205.10868, 2022.*

- In Submission **Predictive Representation Learning for Language Modeling.**  
**Qingfeng Lan**, Luke Kumar, Martha White, Alona Fyshe. *arXiv preprint arXiv:2105.14214*, 2021.
- arXiv Preprint **Variational Quantum Soft Actor-Critic.**  
**Qingfeng Lan**. *arXiv preprint arXiv:2112.11921*, 2021.
- 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.**

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## Academic Services

Reviewer JMLR 2020, NeurIPS 2022.

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## Open-Source Code

### 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.

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## 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

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## Computer skills

- Advanced Python, PyTorch
- Intermediate Tensorflow, Keras, C/C++
- Basic PennyLane, Octave/MATLAB, Verilog, Haskell