

# Qingfeng Lan

## Curriculum Vitae

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📄 [Personal Website](#)  
🔍 [Google Scholar](#)  
🌐 [Linkedin](#)  
🐙 [Github](#)

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**Research Interest** Reinforcement Learning, Continual Learning, Embodied AI, LLM with human feedback, Meta-Learning.

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## Education

- 20.09 - Present **Doctor of Philosophy in Computing Science**, *University of Alberta*, Canada.  
Supervisor [A. Rupam Mahmood](#)
- 18.09 - 20.08 **Master of Science in Computing Science**, *University of Alberta*, Canada.  
Supervisor [Alona Fyshe](#)
- 14.09 - 18.07 **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](#)

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## Employment

- 24.06 - 24.10 **Research Intern**, *Meta Reality Lab*, California, United States.  
Collaborator [Rohan Chitnis](#), [Alborz Geramifard](#)  
Project Improving Next-generation Wearables through Reinforcement Learning. [\[Link\]](#)
- 22.07 - 23.01 **Research Intern**, *Sea AI Lab*, Singapore.  
Collaborator [Zhongwen Xu](#), [Shuicheng Yan](#)  
Project Learning to Optimize for Reinforcement Learning. [\[Link\]](#)
- 22.01 - 22.06 **Research Intern**, *Huawei Noah's Ark Lab*, Edmonton, Canada.  
Collaborator [Yangchen Pan](#), [Jun Luo](#)  
Project Memory-efficient Reinforcement Learning with Value-based Knowledge Consolidation. [\[Link\]](#)
- 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](#)  
Project A Deep Top-K Relevance Matching Model for Ad-hoc Retrieval. [\[Link\]](#)

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## Publications

\*: Equal contribution

### Conference and Journal Articles

- Nature-2024** **Loss of Plasticity in Deep Continual Learning.**  
Shibhansh Dohare, J. Fernando Hernandez-Garcia, **Qingfeng Lan**, Parash Rahman, A. Rupam Mahmood, Richard S. Sutton. *To appear in Nature*, 2024. **Article.**
- RLC-2024 **Learning to Optimize for Reinforcement Learning.**  
**Qingfeng Lan**, A. Rupam Mahmood, Shuicheng Yan, Zhongwen Xu. *Reinforcement Learning Conference*, 2024. **Poster.** [\[Link\]](#)
- RLC-2024 **More Efficient Randomized Exploration for Reinforcement Learning via Approximate Sampling.**  
Haque Ishfaq, Yixin Tan, Yu Yang, **Qingfeng Lan**, Jianfeng Lu, A. Rupam Mahmood, Doina Precup, Pan Xu. *Reinforcement Learning Conference*, 2024. **Poster.** [\[Link\]](#)
- RLC-2024 **Weight Clipping for Deep Continual and Reinforcement Learning.**  
Mohamed Elsayed, **Qingfeng Lan**, Clare Lyle, A. Rupam Mahmood. *Reinforcement Learning Conference*, 2024. **Poster.** [\[Link\]](#)
- ICLR-2024 **Provable and Practical: Efficient Exploration in Reinforcement Learning via Langevin Monte Carlo.**  
Haque Ishfaq\*, **Qingfeng Lan\***, Pan Xu, A. Rupam Mahmood, Doina Precup, Anima Anandkumar, Kamyar Azizzadenesheli. *International Conference on Learning Representations*, 2024. **Poster.** [\[Link\]](#)
- 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. **CoLLAs certification.** [\[Link\]](#)
- 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.** [\[Link\]](#)

### Workshop and Non-Refereed Articles

- ICML-2023 **Elephant Neural Networks: Born to Be a Continual Learner.**  
**Qingfeng Lan**, A. Rupam Mahmood. *ICML Workshop on High-dimensional Learning Dynamics*, 2023. **Poster.** [\[Link\]](#)
- EWRL-2023 **Overcoming Policy Collapse in Deep Reinforcement Learning.**  
Shibhansh Dohare, **Qingfeng Lan**, A. Rupam Mahmood. *European Workshop on Reinforcement Learning*, 2023. **Poster.** [\[Link\]](#)
- arXiv-2021 **Variational Quantum Soft Actor-Critic.**  
**Qingfeng Lan**. *Quantum Computing Course Project*, 2021. [\[Link\]](#)

- Master Thesis **Predictive Representation Learning for Language Modeling.**  
Qingfeng Lan. 2020. [\[Link\]](#)
- 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.* [\[Link\]](#)

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## Academic Services

- Reviewer JMLR 2020, NeurIPS 2022-2024, ICLR 2023-2024, AISTATS 2023, CoLLAs 2023-2024, ICML 2024, RLC 2024, RLC 2024 Workshop Deployable RL.

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## Open-Source Code

### [Jaxplorer.](#)

A Jax reinforcement learning framework for exploring new ideas.

### [Optim4RL.](#)

A Jax framework of learning to optimize for reinforcement learning.

### [Explorer.](#)

A PyTorch reinforcement learning framework for exploring new ideas.

### [Gym Games.](#)

A collection of Gymnasium compatible games for reinforcement learning.

### [Quantum Explorer.](#)

A quantum reinforcement learning framework based on PyTorch and PennyLane.

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## Teaching Experience

- Fall 2023 **Teaching Assistant**, *University of Alberta*, Edmonton, Canada.  
CMPUT 340: Introduction to Numerical Methods
- 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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## Awards & Honors

- 2023 **Alberta Innovates Graduate Student Scholarship**, CAD 31,000.  
University of Alberta

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## Computer skills

- Language Python, Matlab, C
- Framework Jax, PyTorch, Tensorflow