

QINGYUAN WU

University of Southampton, Southampton, SO14 3LG

✉ [mail](#) 🏠 [homepage](#) [in linkedin](#) [github](#)

Research Interests

Reinforcement Learning, Machine Learning

Education

University of Southampton Sep. 2024 – Sep. 2026 (Expected)
Doctorate of Philosophy in Computer Science Southampton, UK

University of Liverpool Sep. 2023 – Sep. 2024
Doctorate of Philosophy in Computer Science (transfer to Southampton) Liverpool, UK

Nanjing University of Aeronautics and Astronautics Sep. 2019 – April 2022
Master of Engineering in Computer Science Nanjing, CN

Nanjing University of Aeronautics and Astronautics Sep. 2015 – June 2019
Bachelor of Science in Mathematics Nanjing, CN

Work Experience

Parametrix.AI Technology April 2022 – Sep. 2023
Reinforcement Learning and Gaming AI Researcher, full time ShenZhen, CN

- Working on the most challenging and complicated gaming scenarios(e.g., FPS, TPS).
- Developed various and lively gaming AI (e.g., human-like, highly-skilled).

Publications

Conference

- **Qingyuan Wu**, Simon Sinong Zhan, Yixuan Wang, Yuhui Wang, Chung-Wei Lin, Chen Lv, Qi Zhu, Chao Huang. *Variational Delayed Policy Optimization*. Conference on Neural Information Processing Systems 2024 (NeurIPS 2024).
- **Qingyuan Wu**, Simon Sinong Zhan, Yixuan Wang, Yuhui Wang, Chung-Wei Lin, Chen Lv, Qi Zhu, Jürgen Schmidhuber, Chao Huang. *Boosting Reinforcement Learning with Strongly Delayed Feedback Through Auxiliary Short Delays*. International Conference on Machine Learning 2024 (ICML 2024).
- Yuhui Wang, Weida Li, Francesco Faccio, **Qingyuan Wu**, Jürgen Schmidhuber. *Highway Value Iteration Networks*. International Conference on Machine Learning 2024 (ICML 2024).
- Simon Sinong Zhan, Yixuan Wang, **Qingyuan Wu**, Ruochen Jiao, Chao Huang, Qi Zhu. *State-wise Safe Reinforcement Learning With Pixel Observations*. Learning for Dynamics & Control Conference 2024 (L4DC 2024).

Journal

- Dan Zhu, Xiaohong Chen, **Qingyuan Wu**, Shunming Li. *Subspace Clustering Induced by Adaptive Graph Learning*. Computer Engineering and Applications, 56(21):8, 2019.

Thesis

- [Master thesis] *Research on Efficient Exploration and Learning Method Based on Rollout in Complex Scenarios*. Advised by Prof. Xiaoyang Tan

Preprint

- Simon Sinong Zhan, **Qingyuan Wu**, Zhian Ruan, Frank Yang, Philip Wang, Yixuan Wang, Ruochen Jiao, Chao Huang, Qi Zhu. *Inverse Delayed Reinforcement Learning*. arxiv: 2412.02931.
- Yuhui Wang, **Qingyuan Wu**, Weida Li, Dylan R. Ashley, Francesco Faccio, Chao Huang, Jürgen Schmidhuber. *Scaling Value Iteration Networks to 5000 Layers for Extreme Long-Term Planning*. arxiv: 2406.08404v1.
- Yuhui Wang, Miroslav Strupl, Francesco Faccio, **Qingyuan Wu**, Haozhe Liu, Michał Grudziński, Xiaoyang Tan, Jürgen Schmidhuber. *Highway Reinforcement Learning*. arxiv: 2405.18289.

- Jiayu Yao, **Qingyuan Wu**, Quan Feng, Songcan Chen. *Learning downstream task by selectively capturing complementary knowledge from multiple self-supervisedly learning pretexts*. arxiv: 2204.05248, 2022.
- **Qingyuan Wu**, Yuhui Wang. *Expected-Max Ensembled Q-learning with Temporally-Varying Exploration*. 2021.
- Yuhui Wang, **Qingyuan Wu**, Pengcheng He, Xiaoyang Tan. *A Novel Greedy-Step Bellman Optimality Equation for Efficient Value Propagation*. arxiv: 2102.11717, 2021.
- **Qingyuan Wu**, Xiaoyang Tan. *Graph-Constrained Monte Carlo Tree Search for Low Variance Bus Driver Scheduling*. 2021.

Technical Skills

Programming Skills: Python, C++, Pytorch, Tensorflow