Qi Yang

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Education

HuaZhong University of Science and Technology Wuhan, China
Bachelor of Engineering - Artificial Intelligence and Automation; *Sep. 2015 - June 2019*

GPA: *3.4(Top 30%), especially reached 3.8 on the major courses in last 2 years.*
Courses: *Probability Theory, Calculus, Data structure, Computer Network, Principle of Micro-Computer system, Artificial Intelligence, Machine Learning, Automatic Control Theory, System Identification, Information System, Complexity Science, Engineering Mathematics,etc.*

Southern University of Science and Technology Shenzhen, China
Master of Engineering - Computer Science and Engineering; *Sep. 2019 - June 2022*

Research Lab: *Nature Inspired Computation and Applications Laboratory (supervised by Ke Tang)*
Publications: *1 SCI-indexed paper (CCF C), 1 EI-indexed paper, 1 working paper, 1 patent under review*
Courses: *Advanced Algorithms, Advanced Artificial Intelligence, Advanced Computer Network, Academic English Writing, etc.*

Skills Summary

Coding:	Python(TensorFlow, Pytorch, Keras, Matplotlib, Pandas, etc.), C++, HTML/CSS/JavaScript, Linux, Docker
Language:	IETLS 6.5, Reading 8.0
Soft Skills:	Fast Reading and Skill Learning, Managing Upward, Academic Writing, Grant Apply Ability, Leadership
Assessment:	Self-motivated, Inquisitive, Introvert, Hold Exploring Desire, Strong logical and abstract thinking

Honors and Awards

- Awarded the Outstanding Graduate of HuaZhong University of Science and Technology (*May 2019*)
- Awarded RenMin Scholarship for Self-Enhancement (*Sep 2018*)

Publications

1. Peng Yang, **Qi Yang**, Ke Tang, Xin Yao, Parallel Exploration via Negatively Correlated Search, Frontier of Computer Science, 2020. (SCI-indexed Journal, CCF C) (Poster presentation in ECOLE2021)
2. **Qi Yang**, Peng Yang, Ke Tang, Parallel Random Embedding with Negatively Correlated Search, In: proceeding of The Twelfth International Conference on Swarm Intelligence, Springer Press, 2021. (EI-indexed)
3. **Qi Yang**, Peng Yang, Ke Tang, Boosting Efficiency in Multiple instance Reinforcement Learning with Selective Sampling, 2021. (Working Paper)

Projects

Research on Generalizable Reinforcement Learning Adviser:Ke Tang
Generalization; Reinforcement Learning; Active Learning; *Nov. 2020 - Jun. 2021*

- Designed adversarial learning framework to selectively construct portfolios of tasks to improve the generalization ability of RL policy in unseen scenes and improve efficiency of multi-instance training.
- Investigated widely about the generalization in RL and Reproduced 6 related works about improving generalization performance of RL

Research on Cooperative Co-evolution Algorithm in Reinforcement Learning Adviser:Ke Tang
Derivative-free Algorithm; Large-scale Optimization; Random Embedding; *Jul. 2019 – Jul. 2020*

- Developed a group of derivative-free algorithms (1) to alleviate the performance deterioration of traditional algorithms in million-scale policy parameters optimization (2) to encourage parallel behavior exploration in multi-modal RL optimization.
- Our algorithm outperform gradient-based or derivative-free baselines(SOTA) over 40% on several RL benchmarks by embedding the 1.7 millions parameters into 100 variables.
- Contributed mainly to an open-source repo https://github.com/Desein-Yang/NCS-RL includes all paper codes.
- Applied for a patent of the RL-based techniques on dynamic obstacle avoiding (under review) and Wrote technical reports as 1^{st} author.

Other Potential

- President of Science Fiction Association of HUST (*May 2016 - May 2017*)
- Chairman of Science Fiction Association Union of Wuhan (*May 2016 - May 2017*)