

Qi Yang

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EDUCATION

HuaZhong University of Science and Technology

Bachelor of Engineering - Artificial Intelligence and Automation;

Wuhan, China

Sep. 2015 - June 2019

- **GPA:** 3.47/4 (Top 30%), especially 3.8/4 in last 2 years.
- **Award:** Outstanding Graduate of HUST (2019) RenMin Scholarship (2018)

Courses: Math (Probability Theory, Calculus, Linear Algebra, Engineering Mathematics, Operation Research, Equation of Mathematical Physics), CS (Data structure & Algorithm, Computer Network, Principle of Micro-Computer, Distributed System, C Programming, Internet Infrastructure), AI (Artificial Intelligence, Machine Learning, Robot Principle, Optimization), Engineering (Digital & Analog circuits, Signal Analysis, Control Theory, Information System, System Identification, Complexity Science, Systems Engineering), etc.

Southern University of Science and Technology

Master of Engineering - Computer Science and Engineering;

Shenzhen, China

Sep. 2019 - June 2022

- **GPA:** 3.04/4
- **Lab:** Nature Inspired Computation and Applications Laboratory (supervisor: Ke Tang)
- **Publication:** 2 published paper (SCI, EI), 1 working paper, 1 invention patent

Courses: Advanced Algorithms, Advanced Artificial Intelligence, Advanced Computer Network, Academic English Writing, etc.

WORK EXPERIENCE

International Digital Economy Academy (IDEA)

Research Intern / NLP Algorithm Engineer

Shenzhen, China

Jan 2022 - now

- **Researched** and **developed** the knowledge-based QA system;
- **Researched** on parameter-efficient fine-tuning algorithms for the large pre-trained model (BERT, GPT, T5 etc.);
- **Contributed** to the training framework Fengshen.

SKILLS SET

Code Skills: Fluent in Python (4 years), Basic in C/C++, Go
AI/ML: TensorFlow, Pytorch, Matplotlib, Numpy, Pandas, Transformers, etc.
WorkFlow: Linux, Shell, Git, Docker, Conda, Singularity
Database/Cloud: SQL, Access, MySQL, Spark, Alicloud, AWS
Language: IELTS 6.5 (Reading 8.5 Writing 6.5); CET-4 and CET-6 certification;
Soft Skills: Fluency Reading & Writing in Chinese/English; Fast Learning; Presentation; Leadership and Collaboration;

RESEARCH PROJECTS

Research on Generalizable Reinforcement Learning

Generalization; Reinforcement Learning; Active Learning;

Supervisor: Ke Tang

Nov. 2020 - Jun. 2021

- **Proposed** and **developed** an active learning framework to selectively sampling representative and valuable training sets, which reduced training budget to 50% and achieved competitive performance.
- **Implemented** 6 relevant SOTAs on improving generalization.
- **Advanced** the procedural content generation environment of RL.

Research on Cooperative Co-evolution Algorithm in Reinforcement Learning

Derivative-free Algorithm; Large-scale Optimization; Random Embedding;

Supervisor: Ke Tang

Jul. 2019 - Jul. 2020

- **Developed** a group of derivative-free algorithms for large-scale and multi-peak RL optimization problems, exceeds SOTA than 40% and scores double to triple on hard-explored benchmarks respectively.
- **Designed** and **developed** an open-source project for Evolutionary-based RL [NCS-RL]
- **Published** 2 SCI/EI indexed papers and technical reports (Huawei), **applied** an invention patent as 1st author.

PUBLICATIONS / PATENTS

1. Peng Yang, **Qi Yang**, Ke Tang, Xin Yao, Parallel Exploration via Negatively Correlated Search, Frontiers of Computer Science, 2020. (SCI) (Poster, ECOLE2021)
2. **Qi Yang**, Peng Yang, Ke Tang, Parallel Random Embedding with Negatively Correlated Search, In: Advances in Swarm Intelligence, Springer, 2021. (EI) (Oral, ICSI2021)
3. **Qi Yang**, Peng Yang, Ke Tang, Active Reinforcement Learning over MDPs, 2021. (in progress)
4. **Qi Yang**, Peng Yang, Ke Tang, An automatic practical methods in Dynamic Obstacle Avoiding, No.2021108449413.