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: *3.5(Top 30%), especially reached 3.8 on the major courses in last 2 years.*
Courses: *Math Basis(Probability Theory, Calculus, Engineering Mathematics), CS(Data structure, Computer Network, Principle of Micro-Computer, Distributed System, C Programming, Internet Infrastructure), AI(Artificial Intelligence, Machine Learning, Robot Principle), Engineering(Digital circuits, Analog circuit, Signal Analysis, Control Theory, Information System, System Identification, Complexity Science, Systems Engineering),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: *2 published paper (SCI,EI), 1 working paper, 1 patent(under review)*

PUBLICATIONS / PATENTS

1. Peng Yang, **Qi Yang**, Ke Tang, Xin Yao, Parallel Exploration via Negatively Correlated Search, Frontiers of Computer Science, 2020. (SCI, CCF C) (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, Patents:An automatic paractical methods in Dynamic Obstacle Avoiding.

HONORS AND SCHOLARSHIPS

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

CONFERENCE ATTENDANCES

1. Poster session, Chinese Workshop on Evolutionary COmputation and Learning (ECOLE'2021)

2. Oral presentation, International conference of Swarm and Intelligence (ICSI'2021)

3. Participant, China Conference on Machine Learning (CCML'2021)

SKILLS SUMMARY

Hard Skills:	Python(TensorFlow, Pytorch, Matplotlib, Pandas, etc.), Web(HTML/CSS/JavaScript), Linux workflow
Language:	IELTS 6.5(Reading 8.5 Writing 6.5); CET-4 and CET-6 certification;
Soft Skills:	Fast Reading and Learning, Managing Upward, Grant and Patent Writing, Leadership
Assessment:	Self-motivated Exploration, Inquisitive, Introvert, Strong logical and abstract thinking

RESEARCH PROJECTS

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

- Designed an active learning framework to selectively sampling (competitive performance in 50% training frames of SOTA.) (in progress).
- Investigated about 6+ methods to address the generalization problem of RL.
- Reproduced 6 related state-of-arts works.

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 RL optimization algorithms.
  - to alleviate the performance deterioration in million-scale problem(exceeds SOTA more than 40%).
  - to encourage parallel behavior exploration in multi-modal problem(score 2 to 3 times as many as SOTA).
- Contributed mainly to an open-source [NCS-RL]
- Wrote 2 SCI/EI indexed papers, technical reports (demand from Huawei) and applied 1 patent as 1st author.

OTHER SOCIAL ACTIVITY

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

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