Qi Yang

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Profile:https://desein-yang.github.io Github: github.com/Desein-Yang

Education

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

GPA: *3.47/4(Top 30%), especially reached 3.8/4 on the major courses in last 2 years.*

Awards: *Awarded Outstanding Graduate of HUST (2019) and received RenMin Scholarship for Self-improvement (2018)*

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

GPA: *3.04/4*
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) (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.

Skills Summary

Code Skills: Python(including but not limited TensorFlow, Pytorch, Matplotlib, Numpy, Pandas, etc.), Web(HTML/CSS/JavaScript), C++/C, Linux system(Docker, Git)

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

Experience

International Digital Economy Academy(IDEA) Shenzhen, China
Research Intern *Jan 2022 - now*

- **Algorithm Developing**: Design the derivative-free algorithm for fine tuning and prompt tuning on the downstream specific tasks.
- **Code**: Combine the evolution-based algorithm to train the billion-scale language model.

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 representative and valuable training sets (competitive performance in 50% training frames of SOTA.).
- 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 github repo [NCS-RL]
- Wrote 2 SCI/EI indexed papers, technical reports(Huawei), and applied 1 patent as 1^{st} author.

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)