Xian Fu

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Reinforcement Learning, Artificial Intelligence

EDUCATION

Jilin University	Sep 2018 - Jun 2022
Computer Science Bachelor , Tang Aoqing Honors Program	Changchun, China
GPA: 3.76/4.00 (Top 5%)	
Tianjin University	Sep 2022 - Jan 2025
Software Engineering Master	Tianjin, China

RESEARCH PROJECTS (in progress)

- **Accessing Multi-modal Large Language Models for robotics task planning** (co-first author)

  In this work, we aim to analyze the capability boundaries of SOTA VLMs in robot task planning from multiple perspectives, such as object recognition and affordance extraction.

- **Combining advances in Evolutionary Reinforcement Learning** (3rd student author)

  We classify and analyze the mechanisms proposed in the current ERL field, and attempt to combine them for stronger algorithms.

- **Plasticity Loss in Reinforcement Learning** (First author)

  We delve deeper into the issue of plasticity loss in reinforcement learning and provide many insights. At the same time, we propose a lightweight improvement method to address the problem of current simple reset agent methods wasting previous computing resources (trained agents).

HONORS & AWARDS

Jilin University Academic Scholarship	2019
Jilin University Moral Scholarship	2019
Elite Scholarship of the School of Computer Science and Technology	2020
2nd Prize of Jilin University English Summer Camp	2020

PUBLICATIONS

- **ERL-Re2: Efficient Evolutionary Reinforcement Learning with Shared State Representation and Individual Policy Representation**

  Jianye Hao, Pengyi Li, Hongyao Tang, Yan Zheng, <u>Xian Fu</u> (3rd student author), Zhaopeng Meng

  ICLR 2023

- **RACE: improve multi-agent reinforcement learning with representation asymmetry and collaborative evolution**

  Pengyi Li, Jianye Hao, Hongyao Tang, Yan Zheng, <u>Xian Fu</u> (3rd student author)

  ICML 2023

- **Bridging Evolutionary Algorithms and Reinforcement Learning: A Comprehensive Survey**

  Pengyi Li, Jianye Hao, Hongyao Tang, <u>Xian Fu</u> (3rd student author), Yan Zheng, Ke Tang

  ArXiv preprint 2024

MISCELLANEOUS

- **Certifications:** Artificial Intelligence Career Certification by Huawei Cloud, LLM Prompt Engineer by iFLYTEK SPARK&Datawhale
- **Activities:** 1. Follow up activities at high school alma mater (2019); 2. Volunteer for the Chinese Collegiate Computing Competition (2019); 3. Volunteer for the 7th World Intelligence Congress (2023)