Weizhe Chen

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Education

University of Southern California _Los Angeles, USA_
PH.D. CANDIDATE IN COMPUTER SCIENCE _August 2021 - Present_

- Advised by Prof. Sven Koenig and Prof. Bistra Dilkina.
- My current research interest is large language models for reasoning. More specifically, I have a strong interest in the intersection of optimization and machine learning, especially in large language models, post-training, multi-agent systems, and computational sustainability. I have previously worked on multi-agent planning, optimization, and reinforcement learning.

Shanghai Jiao Tong University _Shanghai, China_
HONORS BACHELOR OF COMPUTER SCIENCE _Sep 2017 - June 2021_

- Member of ACM class in SJTU, which is an elite CS program for 5 % talented student. Advised by Prof. Weinan Zhang and Prof. Yong Yu.
- Research interest in machine learning, reinforcement learning, multi-agent reinforcement learning, game theory, AI for social good.

Working Experience

TikTok Inc. _San Jose, USA_
RESEARCH INTERN _May. 2024 - Dec. 2024_

- Intern in the post-training team in Seed LLM.

Palo Alto Research Center _Palo Alto, USA_
RESEARCH INTERN _Jun. 2022 - Aug. 2022_

Preprints

Iterative Deepening Sampling for Large Language Models (pdf)

- **Weizhe Chen**, Sven Koenig, Bistra Dilkina.

RePrompt: Planning by Automatic Prompt Engineering for Large Language Models Agents (pdf)

- **Weizhe Chen**, Sven Koenig, Bistra Dilkina.

Why Solving Multi-agent Path Finding with Large Language Model has not Succeeded Yet (pdf)

- **Weizhe Chen**, Sven Koenig, Bistra Dilkina.

MARL-LNS: Cooperative Multi-agent Reinforcement Learning via Large Neighborhoods Search (pdf)

- **Weizhe Chen**, Sven Koenig, Bistra Dilkina.

No Panacea in Planning: Algorithm Selection for Suboptimal Multi-Agent Path Finding (pdf)

- **Weizhe Chen***, Zhihan Wang*, Jiaoyang Li, Sven Koenig, Bistra Dilkina.
- Accepted by AAAI-23 MAPF Workshop.

Publications

Flaming-hot Initiation with Regular Execution Sampling for Large Language Models (pdf) _NAACL 2025 Findings_

- **Weizhe Chen**, Zhicheng Zhang, Guanlin Liu, Renjie Zheng, Wenlei Shi, Dun Chen, Zheng Wu, Xing Jin, Lin Yan.

Discovering Symbolic Policy for Building Control System Using Reinforcement Learning (pdf) _IFAC WC 2023_

- Soo Kyung Kim*, Chihyeon Song*, **Weizhe Chen***, Jinkyoo Park, Saman Mostafavi.

Landscape Optimization for Prescribed Burns in Wildfire Mitigation Planning (pdf) _COMPASS-22_

- **Weizhe Chen**, Eshwar Parasad Sivaramakrishnan, Bistra Dilkina.

Temporal Induced Self-Play for Stochastic Bayesian Games (pdf) *IJCAI-21*

- **Weizhe Chen***, Zihan Zhou*, Yi Wu, Fei Fang.

Data-Driven Multimodal Patrol Planning for Anti-poaching (pdf) *IAAI-2021*

- **Weizhe Chen**, Weinan Zhang, Duo Liu, Weiping Liu, Xiaojun Shi, Fei Fang.

When to Follow the Tip: Security Games with Strategic Informants (pdf) *IJCAI-PRICAI 2020*

- Weiran Shen, **Weizhe Chen**, Taoan Huang, Rohit Singh, Fei Fang.

Bi-level Actor-Critic for Multi-agent Coordination (pdf) *AAAI 2020 Oral*

- Haifeng Zhang, **Weizhe Chen**, Zeren Huang, Minne Li, Yaodong Yang, Weinan Zhang, Jun Wang.

Honors and Awards

USC Viterbi Graduate Fellowship *2021*

Team Member of Programming Contest Team Quasar
- Silver medal, 15th place in 'The 2018 CCPC final'.
- Gold medal, 2nd place in 'The 2018 ICPC Asia Nakhon Pathom Regional Contest'.
- Gold medal, 12th place in '2018 ICPC China Qingdao Provincial Programming Contest'.
- Gold medal, 4th place in '2018 CCPC Guilin Provincial Programming Contest'.

Team Member of Programming Contest Team Blazar
- Gold medal, 6th place in '2017 CCPC QinHuangDao Regional Contest'.
- Silver medal, 5th place in '2017 ACM-ICPC Asia-Manila Regional Contest'.