

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, 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

ByteDance Inc.

Remote

PART-TIME RESEARCH INTERN

Aug. 2024 - Dec. 2024

TikTok Inc.

San Jose, USA

RESEARCH INTERN

May. 2024 - Aug. 2024

Palo Alto Research Center

Palo Alto, USA

RESEARCH INTERN

Jun. 2022 - Aug. 2022

Preprints

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'.