Kerong Wang

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Education

University of Southern California (USC), Los Angeles, California, United States 2022 – Present

Master in Computer Science, Expected Graduation July 2024, *Grades: N/A*

Shanghai Jiao Tong University (SJTU), Shanghai, China 2018 – 2022

Bachelor in Computer Science (IEEE Honored Class), *Grades: 91.6 / 100, Rank: 7 / 133*

Experience

Microsoft Research Asia | Research Intern | Shanghai, China July 2021 - January 2022

- Participated in a research to combine bootstrapping with transformer architecture on offline reinforcement learning tasks.
- Proposed a novel algorithm that incorporates the idea of bootstrapping and leverages the learned model to self-generate more offline data to further boost the sequence model training.
- Extensive experiments on two offline RL benchmarks demonstrate that the proposed algorithm can largely remedy the existing offline RL training limitations and beat other strong baseline methods.
- One paper is under review and a preprint version is shared on `https://arxiv.org/abs/2206.08569`.

Apex Lab, Shanghai Jiao Tong University | Shanghai, China June 2020 - June 2021

- Worked in a project on reducing solution time of factory scheduling problems with Apex Lab's cooperated enterprise.
- Successfully applied machine learning and reinforcement learning techniques in cut selection phase of combinatorial optimization in factory scheduling problems.
- Experiments on real-world datasets demonstrated our method significantly reduces the solution time by 12.42% without accuracy loss at the scale of 10^7 variables and constraints. Experiments on synthetic datasets also proved our method was superior to manually designed heuristics and has stronger generalization ability to problems of different properties.
- One paper *Learning to Select Cuts for Efficient Mixed-Integer Programming* was published by journal *Pattern Recognition 2022*.

Apex Lab, Shanghai Jiao Tong University | Shanghai, China March 2019 - May 2020

- Participated in a project on applying graph convolutional networks to knowledge tracing problems.
- Proposed a new model that effectively incorporated question-skill correlations and generalized students' mastering level of questions in knowledge tracing tasks.
- Experiments with three datasets demonstrated that our model achieved state-of-the-art performance, realizing at least 1% absolute AUC improvement.
- One paper *GIKT: A Graph-based Interaction Model for Knowledge Tracing* was published at conference *ECML-PKDD 2020*.

Publications

Paper: *Learning to Select Cuts for Efficient Mixed-Integer Programming*

- Zeren Huang, **Kerong Wang**, Furui Liu, Hui-ling Zhen, Weinan Zhang, Mingxuan Yuan, Jianye Hao, Yong Yu, Jun Wang; *Pattern Recognition 2022*

Paper: *GIKT: A Graph-based Interaction Model for Knowledge Tracing*

- Yang Yang, Jian Shen, Yanru Qu, Yunfei Liu, **Kerong Wang**, Yaoming Zhu, Weinan Zhang, Yong Yu; *ECML-PKDD 2020*

Skills & Interest

- Technical: Python (Major), C++, Java
- Other: Microsoft Office Suite, Docker, MuJoCo
- Interest: Video Games (PC, Mobile), Music