Yachen Kang

No. 600 Dunyu Road, Sandun Town, Xihu District, Hangzhou, P.R. China

(+86)186-2642-6235 | kangyachen@westlake.edu.cn | https://yachenkang.github.io/ | yachenkang | YachenKang | Yachen Kang

Education

Zhejiang University & Westlake University

Hangzhou, China

JOINT PH.D. STUDENT IN COMPUTER SCIENCE — *Sept. 2018 - Present*

- Advisor: Prof. Donglin Wang
- Affiliated with Machine Intelligence Laboratory (MiLAB) in Westlake University

Nanjing University

Nanjing, China

B.E. IN BIOMEDICAL ENGINEERING — *Sept. 2014 - Aug. 2018*

- GPA: 3.93

Research Interests

Committed to giving robots the ability to understand the task and learn from expert's demonstration or feedback, so that they can complete new tasks, acquire new skills or adapt to new environments rapidly through learning algorithms, with fewer interaction and getting rid of the reward engineering.

Currently, my areas of interest include *preference-based reinforcement learning (RLHF)*, *imitation-learning*, *offline reinforcement learning*, and *transfer learning* tasks. Also interested in natural language processing, network architecture search, and biologically plausible deep learning.

Publications

Preprint

- **Off-Dynamics Inverse Reinforcement Learning from Hetero-Domain**
  Yachen Kang, Jinxin Liu, Xin Cao and Donglin Wang.
- **STRAPPER: Preference-based Reinforcement Learning via Self-training Augmentation and Peer Regularization**
  Yachen Kang, Li He, Jinxin Liu, Zifeng Zhuang and Donglin Wang.
- **CEIL: Generalized Contextual Imitation Learning**
  Jinxin Liu, Li He, **Yachen Kang**, Zifeng Zhuang, Donglin Wang, and Huazhe Xu.
- **Design from Policies: Conservative Test-Time Adaptation for Offline Policy Optimization**
  Jinxin Liu, Hongyin Zhang, Zifeng Zhuang, **Yachen Kang**, Donglin Wang, and Bin Wang.
- **Beyond OOD State Actions: Supported Cross-Domain Offline Reinforcement Learning**
  Jinxin Liu, Ziqi Zhang, Zhenyu Wei, Zifeng Zhuang, **Yachen Kang**, Sibo Gai, and Donglin Wang.

Conference

- **Beyond Reward: Offline Preference-guided Policy Optimization**
  Yachen Kang, Diyuan Shi, Jinxin Liu, Li He, Donglin Wang.
  In Proceedings of the Fortieth International Conference on Machine Learning (**ICML 2023**).
- **Unsupervised Domain Adaptation with Dynamics-Aware Rewards in Reinforcement Learning**
  Jinxin Liu, Hao Shen, Donglin Wang, **Yachen Kang**, Qiangxing Tian.
  In Proceedings of the Thirty-fifth Conference on Neural Information Processing Systems (**NeurIPS 2021**).
- **Attributes-Guided and Pure-Visual Attention Alignment for Few-Shot Recognition**
  Siteng Huang, Min Zhang, **Yachen Kang**, Donglin Wang.
  In Proceedings of the 35th AAAI Conference on Artificial Intelligence (**AAAI 2021**).
- **Deep Transfer Collaborative Filtering with Geometric Structure Preservation for Cross-Domain Recommendation**
  Yachen Kang, Sibo Gai, Feng Zhao, Donglin Wang and Ao Tang.
  In Proceedings of the 2020 International Joint Conference on Neural Networks (**IJCNN 2020**).
- **Independent Skill Transfer for Deep Reinforcement Learning**
  Qiangxing Tian, Guanchu Wang, Jinxin Liu, Donglin Wang, **Yachen Kang**.
  In Proceedings of the 2020 International Joint Conferences on Artificial Intelligence (**IJCAI 2020**).

- **Cross-domain deep collaborative filtering for recommendation**
  Yachen Kang, Sibo Gai, Feng Zhao, Donglin Wang, Yi Luo.
  In Proceedings of the 2019 International Conference on Data Mining Workshops (**ICDM 2019**).
- **Deep transfer collaborative filtering for recommender systems**
  Sibo Gai, Feng Zhao, **Yachen Kang**, Zhengyu Chen, Donglin Wang, Ao Tang.
  In Proceedings of the Pacific Rim International Conference on Artificial Intelligence (**PRICAI 2020**).

Services

Conference and Journal Reviewer

- International Conference on Machine Learning (ICML)
- AAAI Conference on Artificial Intelligence (AAAI)
- International Joint Conference on Artificial Intelligence (IJCAI)
- ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD)
- Conference and Workshop on Neural Information Processing Systems (NeurIPS)

Teaching

- Deep Reinforcement Learning, Head TA in Fall 2021

Projects

Government Sponsored Research

Core Member, NSFC General Program (Deep RL on real quadruped robot) *Grant No. 62176215*
Core Member, National Science and Technology Innovation 2030 - Major Project *Grant No. 2022ZD0208800*
Core Member, Development of the Blind-Guiding Quadruped Robot System *Hangzhou 2022 Asian Games*

Company Sponsored Research

Core Member, Machine Learning and Robot Behavioral Learning *Bright Dream Robotics, Guangdong*
Core Member, Quadruped Robot Platform on Farmland Protection *Westlake Uni.-Muyuan Joint Research Inst.*
Core Member, Development of Low Cost Navigation Equipment *Westlake Uni.-Muyuan Joint Research Inst.*

Skills

Programming Languages Python(Expert), LaTeX(Intermediate)
Frameworks PyTorch
Tools Git, VSCode
Languages Chinese (native), English (Spoken and written)