JINXIN LIU

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[IJCAI, 2020]

EDUCATION 教育

Zhejiang University

Ph.D., Computer Science

★ Zhejiang University & Westlake University Joint Ph.D. Program

★ Advisor: Prof. Donglin Wang (国家科技创新 2030 重大项目, 首席科学家)

Chongqing University of Posts and Telecommunications

B.Eng., Communications Engineering

2019.09 - 2024.06

Hangzhou, China

Chongqing University of Posts and Telecommunications

Chongqing, China

★ Cumulative GPA: 3.8/4.0 Rank: 1/42 (for four consecutive years)

RESEARCH INTERESTS 研究经历

- ★ Deep Reinforcement Learning (RL): focusing on general and ready-to-be-deployed RL algorithms, *i.e.*, imitation learning, reward-free RL, unsupervised RL (learning skills), and RL in real-world tasks (games).
- ★ Planning and Inference: offline RL, offline-to-online RL, embodied agent, and design from data.
- ★ Distribution Shift: RL dynamics/embodyment adaptation, multi-goal RL, sim2real, and sample-efficient RL.

SELECTED PREPRINTS 最新工作

[1] <u>Jinxin L</u>, Li H, Yachen K, Zifeng Z, Donglin W, and Huazhe X.

CEIL: Generalized Contextual Imitation Learning. <u>PDF</u>

[3] <u>Jinxin L</u>, Hongyin Z, Zifeng Z, Yachen K, Donglin W, and Bin W.

Design from Policies: Conservative Test-Time Adaptation for Offline Policy Optimization. <u>PDF</u>

[2] <u>Jinxin L</u>, Ziqi Z, Zhenyu W, Zifeng Z, Yachen K, Sibo G, and Donglin W.

Beyond OOD State Actions: Supported Cross-Domain Offline Reinforcement Learning. <u>PDF</u>

[4] <u>Jinxin L</u>, Lipeng Z, Li H, and Donglin W.

CLUE: Calibrated Latent Guidance for Offline Reinforcement Learning. <u>PDF</u>

SELECTED PUBLICATIONS 部分文章

[1] **Jinxin** L, Hongyin Z, and Donglin W. [ICLR, 2022] DARA: Dynamics-Aware Reward Augmentation in Offline Reinforcement Learning. PDF [2] **Jinxin** L, Donglin W, Qiangxing T, and Zhengyu C. [AAAI, 2022] Learn Goal-Conditioned Policy with Intrinsic Motivation for Deep Reinforcement Learning. PDF [3] **Jinxin** L, Hao S, Donglin W, Yachen K, and Qiangxing T. [NeurIPS, 2021] Unsupervised Domain Adaptation with Dynamics-Aware Rewards in Reinforcement Learning. PDF [4] Zifeng Z, Kun L, **Jinxin L**, Donglin W, and Yilang G. [ICLR, 2023] Behavior Proximal Policy Optimization. PDF [5] Yao L, Jinxin L, Zhentao T, Bin W, Jianye H, and Ping L. [ICML, 2023] ChiPFormer: Transferable Chip Placement via Offline Decision Transformer. PDF [6] Yachen K, Diyuan S, **Jinxin** L, Li H, and Donglin W. [ICML, 2023] Beyond Reward: Offline Preference-Guided Policy Optimization. PDF

Independent Skill Transfer for Deep Reinforcement Learning. PDF

[8] Qiangxing T, Jinxin L, Donglin W, and Ao T.

Time Series Prediction with Interpretable Data Reconstruction. PDF

[7] Qiangxing T, Guanchu W, **Jinxin L**, Donglin W, and Yachen K.

INTERNSHIP EXPERIENCE 实习经历

★ Research Intern (2022.06 - 2022.10)

Noah's Ark Lab, Huawei

Finished with two papers on [1] chip placement tasks and [2] standard offline reinforcement learning tasks:

- [1] We proposed ChiPFormer that can exploit offline placement designs to learn transferable policies, promote effective finetuning for unseen chip circuits, and *reduce the placement runtime from hours to minutes*. PDF
- [2] We proposed Design fROm Policies that decouples the iterative bi-level offline RL from the offline training phase, forming a non-iterative bi-level paradigm and avoiding the iterative error propagation over two levels. PDF

★ Visiting Student (2018.10 - 2019.05)

Westlake University

Early-stage research training: finished with two papers (1st author) on time series prediction: [PDF] & [PDF].

ACADEMIC SERVICES 学术服务

★ Talks

- [1] Beyond Design from Data: Design from Policies is All You Need
- Ali Cloud, Alibaba

[2] Diffusion-Guided Diversity for Offline RL

- Noah's Ark Lab, Huawei
- [3] Control as Inference: A General Review[4] Unsupervised Reinforcement Learning for Skill Discovery
- Second Research Institute of CASIC Westlake Robot Learning Symposium
- [5] Hi, Robot: Training a Versatile Robot from Scratch
- Talk to the Future, Westlake University
- [6] Time Series Prediction with Interpretable Data Reconstruction

Zhejiang University

★ Teaching

[1] Deep Reinforcement Learning

Head TA in Fall 2021 and Spring 2023

★ Conference Reviewer

ICML, ICLR, NeurIPS, IJCAI, AAAI, KDD, and IROS.

Academic Services

RESEARCH PROJECT 研究课题

★ Government Sponsored Research

[1] NSFC General Program (Deep RL on real quadruped robot)

Grant No. 62176215

[2] National Science and Technology Innovation 2030 - Major Project

Grant No. 2022ZD0208800

[3] Development of the Blind-Guiding Quadruped Robot System

Hangzhou 2022 Asian Games

★ Company Sponsored Research

[1] Machine Learning and Robot Behavioral Learning

Bright Dream Robotics, Guangdong

[2] Quadruped Robot Platform on Farmland Protection

Westlake Uni.-Muyuan Joint Research Inst.

[3] Development of Low Cost Navigation Equipment

Westlake Uni.-Muyuan Joint Research Inst.

Responsible for Core Members

- $\circ \ RL \ theory: \ research \ on \ RL \ sample \ efficiency, \ domain \ adaptation, \ and \ sim2real \ issues.$
- o Real-world robot deployment: Deploying RL algorithms on a robotic arm and a quadruped robot.

SELECTED AWARDS & HONORS 荣誉奖励

Outstanding Student (<10%)	2022
Su-Wu Scholarship (<5%)	2021
Best Poster Award at WISE 2021 (<5%)	2021
The only Grand Prize at Electronic Design Innovation Challenge (<1%)	2018
Advanced Individuals of Scientific and Technological Innovation (<5%)	2018
Second Prize of National Mobile Internet Application Development Competition (<10%)	2018
National Scholarship (<5%)	2017
First Prize of China Undergraduate Mathematical Contest in Modeling (Chongqing; <5%)	2017
National Encouragement Scholarship (<10%)	2016