

# Hao Hu

## EDUCATION

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SEPT. 2019 - Present	<b>IIIS, Tsinghua University</b> , Beijing, China Ph.D. Candidate in Computer Science GPA: 3.92/4, RANKING: 1/15
SEPT. 2015 - JUN. 2019	<b>Peking University</b> , Beijing, China B.Sc. in Theoretical and Applied Mechanics GPA: 3.73/4, RANKING: 5/31 Double Major: Computer Science and Technology

## RESEARCH EXPERIENCE

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SEPT. 2019- PRESENT	Research in <b>Reinforcement Learning</b> Supervisor: Prof. <a href="#">Chongjie Zhang</a> <a href="#">Machine Intelligence Group</a> , IIIS, Tsinghua University, China <b>Topic: Data-Driven Reinforcement Learning</b>
APR. 2023- SEPT. 2023	Research in <b>Reinforcement Learning</b> Supervisor: Prof. <a href="#">Zhaoran Wang</a> NURL Group, Northwestern University, USA <b>Topic: RL Theory and Principled Autonomous Agents</b>
NOV. 2017- JUN. 2018	Research in <b>Computer Vision</b> Supervisor: Prof. <a href="#">Shiliang Zhang</a> <a href="#">Vision and Media Computing Group</a> , Peking University, China <b>Topic: Semantic Segmentation</b>

## PAPERS AND PREPRINTS

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- **[Reason for Future, Act for Now: A Principled Architecture for Autonomous LLM Agents](#)**  
*Zhihan Liu\*, Hao Hu\*, Shenao Zhang\*, Hongyi Guo, Shuqi Ke, Boyi Liu, Zhaoran Wang*  
Arxiv Preprint
- **[Unsupervised Behavior Extraction via Random Intent Priors](#)**  
*Hao Hu\*, Yiqin Yang\*, Jianing Ye, Ziqing Mai, Chongjie Zhang*  
Thirty-seventh Conference on Neural Information Processing Systems (NeurIPS, 2023)
- **[One Objective to Rule Them All: A Maximization Objective Fusing Estimation and Planning for Exploration](#)**  
*Zhihan Liu\* Miao Lu\* Wei Xiong\* Han Zhong, Hao Hu, Shenao Zhang, Sirui Zheng, Zhuoran Yang, Zhaoran Wang*  
Thirty-seventh Conference on Neural Information Processing Systems (NeurIPS, 2023)
- **[What is Essential for Unseen Goal Generalization of Offline Goal-conditioned RL?](#)**  
*Ruiyang, Yong Lin, Xiaoteng Ma, Hao Hu, Chongjie Zhang, Tong Zhang*  
Fortieth International Conference on Machine Learning (ICML), 2023

- **Generalizable Episodic Memory for Deep Reinforcement Learning**  
Hao Hu, Jianing Ye, Zhizhou Ren, Guangxiang Zhu, Chongjie Zhang  
Thirty-eighth International Conference on Machine Learning (ICML), 2021
- **On the Role of Discount Factor in Offline Reinforcement Learning**  
Hao Hu\*, Yiqin Yang\*, Qianchuan Zhao, Chongjie Zhang  
Thirty-ninth International Conference on Machine Learning (ICML), 2022
- **The Provable Benefit of Unsupervised Data Sharing for Offline Reinforcement Learning**  
Hao Hu\*, Yiqin Yang\*, Qianchuan Zhao, Chongjie Zhang  
Eleventh International Conference on Learning Representations (ICLR), 2023
- **Flow to Control: Offline Reinforcement Learning with Lossless Primitive Discovery**  
Yiqin Yang\*, Hao Hu\*, Xiaoteng Ma\*, Wenzhe Li\*, Siyuan Li, Chongjie Zhang, Qianchuan Zhao  
Thirty-Seventh AAAI Conference on Artificial Intelligence. (AAAI), 2023
- **Offline Reinforcement Learning with Value-based Episodic Memory**  
Xiaoteng Ma\*, Yiqin Yang\*, Hao Hu\*, Qihan Liu, Jun Yang, Chongjie Zhang, Qianchuan Zhao, Bin Liang  
Tenth International Conference on Learning Representations (ICLR), 2022
- **MetaCURE: Meta Reinforcement Learning with Empowerment-Driven Exploration**  
Jin Zhang\*, Jianhao Wang\*, Hao Hu, Tong Chen, Yingfeng Chen, Changjie Fan, Chongjie Zhang  
Thirty-eighth International Conference on Machine Learning (ICML), 2021
- **On the Estimation Bias in Double Q-Learning**  
Zhizhou Ren, Guangxiang Zhu, Hao Hu, Beining Han, Jianglun Chen, Chongjie Zhang  
Thirty-fifth Conference on Neural Information Processing Systems (NeurIPS), 2021

## EXPERIENCE AND SERVICES

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### Engineering Intern

JUN. 2018 - SEPT. 2018      MICROSOFT STCA, NEWS & RELEVANCE TEAM

### Teaching Assistant

SEPT. 2020 - JAN. 2021      Artificial Intelligence: Principles and Techniques, Fall, 2020

SEPT. 2021 - JAN. 2022      Artificial Intelligence: Principles and Techniques, Fall, 2021

FEB. 2022 - PRESENT      Deep Reinforcement Learning, Spring, 2022

## HONORS AND SCHOLARSHIPS

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2022-2023      Huiyan Elite Scholarship

2021-2022      TOYOTA Scholarship

MAY 2017      Second Prize in Zhou Peiyuan Mechanics Competition

2016-2017      **National Scholarship**

SEPT. 2016      Grand Prize in National College Students Physics Competition

2015-2016      Award for Academic Excellents

## CONTACT

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