

Kaiqian Han

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EDUCATION

Tsinghua University

Bachelor of Technology in Automation; GPA: 3.72/4.00 Rank: top 12%

Beijing, China

Expected July 2020

Selected 4.0 courses: Calculus, Linear Algebra, Fundamentals of Computer Program Design, Introduction to complex analysis, Data Structures, Probability and Statistics, Signals and system analysis, Automatic control theory, Operations Research, Fundamental Pattern Recognition

Tsinghua University

Minor in Statistics; GPA: 4.00/4.00

Beijing, China

Expected July 2020

Graduated courses: Elementary Probability Theory, Statistical Inference, Linear Regression Analysis, Multivariate Statistical Analysis, Introduction to Bayesian Statistics

SKILLS

- **Languages:** Python, C++, C, Matlab, R, Verilog
- **Libraries:** TensorFlow, PyTorch, Keras, Scikit-Learn, Numpy, Gym
- **Language:** GRE:329, Toefl:107

Technologies: Git, Latex

RESEARCH INTERESTS

My research interests lie in the general area of machine learning, particularly in reinforcement learning. I am interested in both deep reinforcement learning and theoretical reinforcement learning. Currently I am focusing on representational learning in reinforcement learning. I am also carrying out research on lifelong learning.

PUBLICATIONS

Structural Multi-agent Learning

Kaiqian Han, LiangLiang Ren, Jiwen Lu, Jie Zhou

- Submitted to International Conference on Learning Representations. (ICLR 2020) [Openreview](#)

RESEARCH EXPERIENCE

Lifelong Learning with influence function

Advisor: Prof. Gao Huang

Department of Automation, Tsinghua University

October 2019 - Present

- Undergraduate thesis in Tsinghua University.

Learning to ask questions in time-agnostic prediction

Advisor: Prof. Nan Jiang

CS department, University of Illinois at Urbana-Champaign

July 2019 - Present

- Designed a time-agnostic method to ask questions in uncontrolled tasks.
- Proposed an practical way for paper **Temporal Difference Network** and a framework for asking and answering high-level questions in model-based reinforcement learning.
- Preparing to be submitted to ICML 2020.

Structural multi-agent learning

Advisor: Prof. Jiwen Lu

Department of Automation, Tsinghua University

March 2019 - September 2019

- Developed an multi-agent reinforcement learning algorithm dealing with the cooperation setting.
- Modeled the communication between agents with a graph where agents share their messages and rewards and update the whole system with policy gradient.
- Paper **Structual Multi-agent Learning** submitted to ICLR 2020.

Domain adaptive reinforcement learning for Autonomous Driving

Advisor: Xinlei Pan

EECS, UC Berkeley

July 2018 - Oct 2018

- Developed Bayesian CycleGAN to generate different environments
- Implemented DQN and collected segmentation of torcs
- Carried out experiments to test the efficiency of the domain adaptive algorithm

HONORS AND AWARDS

- **Geru Zheng Scholarship**, Tsinghua University, 2018
- **Geru Zheng Scholarship**, Tsinghua University, 2017