

Hojoon Lee

MACHINE LEARNING RESEARCHER

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Interests

Reinforcement learning

- Applying deep reinforcement learning to understand the human behaviors in multi-agent systems
- Improving adaptability and generalizability of the intelligent agent

Education

KAIST

MASTER OF SCIENCE IN ARTIFICIAL INTELLIGENCE

Seongnam, Korea

Mar.2020 - Present

Korea University

BACHELOR OF SCIENCE IN COMPUTER SCIENCE

Seoul, Korea

Mar.2014 - Feb.2020

- GPA: 4.0/4.5 MAJOR: 4.3/4.5

Research Experience

Data and Visual Analytics Laboratory

RESEARCH INTERN (ADVISOR: PROF. JAEGUL CHOO)

KAIST, Korea

Feb.2019 - Present

Neowiz AI Lab

RESEARCH INTERN

Seongnam, Korea

Mar.2019 - Jul.2019

Data Intelligence Laboratory

RESEARCH INTERN (ADVISOR: PROF. SANGKEUN LEE)

Korea University, Korea

Apr.2018 - Sep.2018

Projects

Creating Game Agent *Poster*

NEOWIZ AI LAB INTERN, DATA AND VISUAL ANALYTICS LAB INTERN

Seongnam, Korea

Feb. 2019 - Dec. 2019

- Achieved human level performance in turn-based strategy game, Browndust
- Implemented Alpha-Zero with Tensorflow where the simulations are parallelized
- Designed neural network architecture using the action embedding information to cope with the variable action space

Question Answering Network for Physical Reasoning *Paper*

DEEP LEARNING, KOREA UNIVERSITY

Seoul, Korea

Sep. 2019 - Dec. 2019

- Designed question answering module to improve physical reasoning in PHYRE benchmark
- Implemented Distributional Deep Q-network with FiLM layer in PyTorch

Speech Recognition *Github*

MACHINE LEARNING, KOREA UNIVERSITY

Seoul, Korea

Sep. 2017 - Dec. 2017

- Performed speech recognition for sentences with numbers
- Implemented Viterbi algorithm in python where the observation probability is estimated with Gaussian Mixture Model

Honors & Awards

Korea Government Full Scholarship, Ministry of Science and ICT of Korea, 2020

2nd place (\$2,000 as awards), Korea University Graduation Project Competition, 1st & 2nd Semester, 2019

- Conquering a rule-changing game with the action-relevance aware Alpha-Zero
- Learning to Cooperate with Fairness in sequential social dilemma

Semester High Honor, Korea University, 2018, 2019

College Scholarship (\$4,000 credit as awards), Seongnam Scholarship Foundation, 2017

Dean's List, Korea University, 2017

Eight Army General Paik Sun Yup Leadership Award, LTG Thomas.S.Vandal & CSM Richard.E.Merritt, U.S Army, 2016