

Cheongwoong Kang

☎ +82 10 6676 1925 | ✉ cw.kang@kaist.ac.kr | 🌐 cheongwoong.github.io

Research Interests: Natural Language Processing, Deep Learning, Reinforcement Learning, XAI

EDUCATION

KAIST

Ph.D. in Artificial Intelligence

South Korea

Mar 2021 – Present

UNIST

M.S. in Computer Science

South Korea

Mar 2019 – Feb 2021

Handong Global University

B.S. in Computer Science

South Korea

Mar 2015 – Feb 2019

AWARDS

Artificial Intelligence Open API Use Case Excellence Award (2nd place): Constructed a QA dataset, which comprises questions asked by financial companies to financial authorities regarding financial regulations. Developed a QA system for financial regulations. Awarded by ETRI (Electronics and Telecommunications Research Institute) (Nov 2020).

2018 Connect6 AI Tournament in Handong Global University (2nd place): Developed an AI algorithm for connect6 based on a score function that evaluates states of the board.

2018 ACM-ICPC Seoul Regional Preliminary Contest (3rd place in campus)

2017 ACM-ICPC Daejeon Regional Preliminary Contest (3rd place in campus)

PROJECTS

Unmanned Swarm Cyber Physical System

Agency for Defense Development

Jan 2021 – Present

- Developed a reinforcement learning based robot control system.
- Investigated adaptive control methods that are robust to environmental changes (e.g. friction, wind).
- Developed decentralized multi-agent reinforcement learning algorithms with communication.

Machine Reading Comprehension with Knowledge Bases

Korea Electronics Technology Institute

Mar 2019 – Dec 2020

- Developed knowledge-base augmented pre-trained language models (BERT) for improving reading comprehension capabilities.
- Investigated what types of questions are difficult for pre-trained language models.

PUBLICATIONS AND PREPRINTS

Cheongwoong Kang and Jaesik Choi. *Impact of Co-occurrence on Factual Knowledge of Large Language Models. Findings of EMNLP* (2023).

Sunjae Kwon, **Cheongwoong Kang**, Jiyeon Han and Jaesik Choi. *Why Do Neural Language Models Still Need Commonsense Knowledge to Handle Semantic Variations in Question Answering?*. arXiv preprint (2022).

Bumjin Park, **Cheongwoong Kang** and Jaesik Choi. *Cooperative Multi-robot Task Allocation with Reinforcement Learning*. Applied Sciences (2021).

Cheongwoong Kang, Bumjin Park and Jaesik Choi. *Scheduling PID Attitude and Position Control Frequencies for Time-optimal Quadrotor Waypoint Tracking under Unknown External Disturbances*. Sensors (2021).

Bumjin Park, **Cheongwoong Kang** and Jaesik Choi. *Generating Multi-agent Patrol Areas by Reinforcement Learning*. International Conference on Control, Automation and Systems. 2021.

Sunjae Kwon, **Cheongwoong Kang**, Jiyeon Han and Jaesik Choi. *Why Do Masked Neural Language Models Still Need Common Sense Knowledge?*. arXiv preprint (2019).

Cheongwoong Kang, Youngheon Ro, Jisu Kim and Heeyoul Choi. *Symbolizing Numbers to Improve Neural Machine Translation*. Journal of Digital Contents Society (2018).