

Jeonghwan Kim

Research Associate at KAIST IR&NLP Lab

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RESEARCH INTERESTS

Natural Language Processing

Question Answering, Robustness, Neuro-symbolic Reasoning, Semi-Parametric Language Models

EDUCATION

Korea Advanced Institute of Science and Technology (KAIST)

Daejeon, Korea

M.S. in School of Computing

Feb. 2020 - Feb. 2022

- Research Associate at IR&NLP Lab (Advisor: Sung-Hyon Myaeng)
- Thesis committee: Sung-Hyong Myaeng, Alice Oh, Junho Lim
- GPA: 4.12 / 4.30

Handong Global University

Pohang, Korea

B.S. in Computer Science & Electrical Engineering

Mar. 2014 - Feb. 2020

- Magna Cum Laude
- GPA: 4.11 / 4.50
- Research Intern at MILab (Advisor: Heeyoul Henry Choi)

PUBLICATIONS

* indicates equal contribution.

- [1] **Exploiting Numerical-Contextual Knowledge to Improve Numerical Reasoning in Question Answering** Findings of NAACL, 2022
Jeonghwan Kim, Junmo Kang, Kyung-min Kim, Giwon Hong, Sung-Hyon Myaeng [pdf]
- [2] **Have You Seen That Number? Investigating Extrapolation in Question Answering Models** EMNLP, 2021
Jeonghwan Kim, Giwon Hong, Kyung-min Kim, Junmo Kang, Sung-Hyon Myaeng [pdf]
- [3] **Leveraging Order-Free Tag Relations for Context-Aware Recommendation** EMNLP, 2021
Junmo Kang, Jeonghwan Kim, Suwon Shin, Sung-Hyon Myaeng [pdf]
- [4] **Can You Distinguish Truthful from Fake Reviews? User Analysis and Assistance Tool for Fake Review Detection** HCI+NLP@EACL, 2021
Jeonghwan Kim*, Junmo Kang*, Suwon Shin*, Sung-Hyon Myaeng [pdf]
- [5] **Maximizing Efficiency of Language Model Pre-training for Learning Representation** Arxiv, 2020
Junmo Kang*, Suwon Shin*, Jeonghwan Kim*, Jaeyoung Jo*, Sung-Hyon Myaeng [pdf]
- [6] **Object Classification on raw radar data using convolutional neural networks** IEEE SAS, 2019
Heejae Han, Jeonghwan Kim, Junyoung Park, YuJin Lee, Hyunwoo Jo, Yonghyeon Park, Eric T Matson, Seongha Park [pdf]
- [7] **Towards the development and realization of an undetectable stealth UAV** IEEE IRC, 2019
Jiyeon Oh, Daeun Choe, Chanhui Yun, Jeonghwan Kim, Michael Hopmeier [pdf]

EXPERIENCES

KAIST IR&NLP Lab

Mar. 2022 - Present

Research Associate

- Working on Question Answering using Graphs and Semi-parametric Language Modeling.

Republic of Korea Marine Corps

Mar. 2015 - Dec. 2016

Sergeant (*Honorably Discharged*)

- Served as both a rifleman and an interpreter for the 31st Battalion.

PROJECTS

Neural Information Retrieval

Mar. 2021 - Present

Funded by Samsung SDS (KAIST - Samsung SDS AI research)

- Developing an efficient open-domain question answering system based on neural sparse representations.

Deep Matching for Efficient Search

Nov. 2019 - Oct. 2020

Funded by NAVER

- Proposed a novel sparse representation model for passage retrieval that can take advantage of an efficient inverted index and symbolic IR techniques [1].

Exobrain

Mar. 2019 - Present

Funded by Korean Government (Ministry of Science and ICT)

- Developed an ensemble model that combines graph-based QA model and reading comprehension QA model (1st rank in the leaderboard of TriviaQA Wikipedia at the date of 08/10/19).
- Worked on improving question generation and unsupervised question answering [??,??,??].
- Presented sample-efficient and robust number representations for question answering [2].

Machine Learning for Context Association and Smart Interaction Suggestion

Mar. 2019 - Mar. 2021

Funded by Korean Government (Ministry of Science and ICT)

- Worked as a project manager, with the focus on Instagram tag recommendation considering multi-modal contexts (image, location, time, text).
- Proposed a novel generation model that takes into account the inter-dependency of tags while alleviating the order sensitivity [3].

HONORS & AWARDS

Graduated with Highest Honor in CSE, Chungnam National University

2019

Grand Prize, Business ICT Competition

2018

Excellence Award, Startup Competition

2018

Finalist (Top 20), NAVER AI Hackathon

2018

Grand Prize, Daejeon Startup School

2017

Excellence Award, CNU Creative Works Competition

2017

Best Excellence Award, C.N.U.Vill

2017

Best Excellence Award, Startup Picnic

2016

Finalist (Top 2), Microsoft Imagine Cup Korea

2016