

Junmo Kang

Research Associate at KAIST IR&NLP Lab

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RESEARCH INTERESTS

Natural Language Processing

Question Answering, Information Retrieval, Efficiency, Robustness

EDUCATION

Korea Advanced Institute of Science and Technology (KAIST)

Daejeon, Korea

M.S. in School of Computing

Feb. 2019 - Feb. 2021

- Research Assistant at IR&NLP Lab (Advisor: Sung-Hyon Myaeng)
- Thesis committee: Sung-Hyong Myaeng, Hojin Choi, Alice Oh
- GPA: 4.03 / 4.30

Chungnam National University

Daejeon, Korea

B.E. in Computer Science & Engineering

Mar. 2012 - Feb. 2019

- Summa Cum Laude
- GPA: 4.30 / 4.50 (Rank: 1/125 in CSE, Major GPA: 4.41)

PUBLICATIONS

* indicates equal contribution.

- [1] **Ultra-High Dimensional Sparse Representations with Binarization for Efficient Text Retrieval** EMNLP, 2021
Kyoung-Rok Jang, **Junmo Kang**, Giwon Hong, Sung-Hyon Myaeng, Joohee Park, Taewon Yoon, Heecheol Seo [pdf]
- [2] **Leveraging Order-Free Tag Relations for Context-Aware Recommendation** EMNLP, 2021
Junmo Kang, Jeonghwan Kim, Suwon Shin, Sung-Hyon Myaeng [pdf]
- [3] **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]
- [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] **Regularization of Distinct Strategies for Unsupervised Question Generation** Findings of EMNLP, 2020
Junmo Kang*, Giwon Hong*, Haritz Puerto San Roman*, Sung-Hyon Myaeng [pdf]
- [6] **Handling Anomalies of Synthetic Questions in Unsupervised Question Answering** COLING, 2020
Giwon Hong*, **Junmo Kang***, Doyeon Lim*, Sung-Hyon Myaeng [pdf]
- [7] **Let Me Know What to Ask: Interrogative-Word-Aware Question Generation** MRQA@EMNLP, 2019
Junmo Kang*, Haritz Puerto San Roman*, Sung-Hyon Myaeng [pdf]

EXPERIENCES

KAIST IR&NLP Lab

Mar. 2021 - Present

Research Associate

- Working on QA and IR.

Poten Brothers

Mar. 2017 - Feb. 2018

Co-founder

- Developed an online interview-based survey platform that induces potential customers to provide start-ups with profound and fresh feedback on their early-stage products.

Republic of Korea Army

Apr. 2013 - Jan. 2015

Honorably discharged as Sergeant

- Compulsory military service.

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 [5,6,7].
- Presented sample-efficient and robust number representations for question answering [3].

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 [2].

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