Junmo Kang

Ph.D. Student at Georgia Tech

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RESEARCH INTERESTS

NATURAL LANGUAGE PROCESSING (NLP)

The long-term goal of my research is to enhance the *practicality* of NLP systems (e.g., Large Language Models) so that they can be widely used *in real-world scenarios*. In particular, my research focuses on *i) how to make NLP models cheaper (i.e., efficient) in terms of data, parameters, or compute*, and *ii) how to build NLP models that are robust to unseen cases in the wild*.

EDUCATION

GEORGIA INSTITUTE OF TECHNOLOGY   Atlanta, GA, USA
PH.D. IN COMPUTER SCIENCE   Aug. 2022 - Present
- Research Assistant at NLP X Lab (Advisors: Dr. Alan Ritter, Dr. Wei Xu)

KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY (KAIST)   Daejeon, Republic of Korea
M.S. IN COMPUTER SCIENCE   Feb. 2019 - Feb. 2021
- Research Assistant at IR&NLP Lab (Advisor: Dr. Sung-Hyon Myaeng)
- Thesis committee: Dr. Sung-Hyong Myaeng, Dr. Hojin Choi, Dr. Alice Oh
- GPA: 4.03 / 4.30

CHUNGNAM NATIONAL UNIVERSITY   Daejeon, Republic of 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

[1] Distill or Annotate? Cost-Efficient Fine-Tuning of Compact Models   ACL 2023
     Junmo Kang, Wei Xu, Alan Ritter

[2] Graph-Induced Transformers for Efficient Multi-Hop Question Answering   EMNLP 2022
     Giwon Hong, Jeonghwan Kim, **Junmo Kang**, Sung-Hyon Myaeng [pdf]

[3] Exploiting Numerical-Contextual Knowledge to Improve Numerical Reasoning in Question Answering
                                                                       Findings of NAACL 2022
     Jeonghwan Kim, **Junmo Kang**, Giwon Hong, Kyung-min Kim, Sung-Hyon Myaeng [pdf]

[4] 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]

[5] Leveraging Order-Free Tag Relations for Context-Aware Recommendation   EMNLP 2021
     Junmo Kang, Jeonghwan Kim, Suwon Shin, Sung-Hyon Myaeng [pdf]

[6] 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]

[7] 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]

[8] Regularization of Distinct Strategies for Unsupervised Question Generation   Findings of EMNLP 2020
Junmo Kang*, Giwon Hong*, Haritz Puerto San Roman*, Sung-Hyon Myaeng [pdf]

[9] Handling Anomalies of Synthetic Questions in Unsupervised Question Answering   COLING 2020
Giwon Hong*, **Junmo Kang***, Doyeon Lim*, Sung-Hyon Myaeng [pdf]

[10] Let Me Know What to Ask: Interrogative-Word-Aware Question Generation   MRQA@EMNLP 2019
Junmo Kang*, Haritz Puerto San Roman*, Sung-Hyon Myaeng [pdf]

* indicates equal contribution.

EXPERIENCES

MIT-IBM Watson AI Lab   May. 2023 - Aug. 2023 (Expected)
Research Intern
- Working on large language models.

Georgia Tech NLP X Lab   Aug. 2022 - Present
Graduate Research Assistant
- Worked on cost-efficiency analysis of small and large language models [1].

KAIST IR&NLP Lab   Mar. 2021 - Jul. 2022
Research Associate
- Worked on efficient methods for multi-hop QA [2].

KAIST IR&NLP Lab   Feb. 2019 - Feb. 2021
Graduate Research Assistant
- Worked on question generation and unsupervised question answering for data-efficiency [8,9,10].
- Presented sample-efficient and robust number representations for question answering [6,3].
- Proposed a novel generation model that takes into account the inter-dependency of tags while alleviating the order sensitivity [5].
- Proposed a novel sparse representation model for passage retrieval that can take advantage of an efficient inverted index and symbolic IR techniques [4].

Republic of Korea Army   Apr. 2013 - Jan. 2015
Honorably discharged as Sergeant
- Compulsory military service.

HONORS & AWARDS

Graduated with Highest Honor in CSE, Chungnam National University	2019
Grand Prize, Business ICT Competition	2018
Excellence Award, Startup Competition	2018
Finalist, NAVER AI Hackathon	2018
Grand Prize, Daejeon Startup School	2017
Best Excellence Award, Startup Picnic	2016
Finalist, Microsoft Imagine Cup Korea	2016