

Seungone Kim

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My main research goal is to build neural models with enhanced reasoning capabilities and to supplement insufficient knowledge. Specifically, I am interested in injecting and utilizing commonsense knowledge to/with neural models [C2], analyzing to which extent neural models can do commonsense reasoning [P1], and enabling neural models to follow the given instructions [To Be Added].

Education

- **Yonsei University** **Seoul, Korea**
B.S. in Computer Science *March 2018 – February 2023*
Early Graduation (7 semesters)
Advisor : Jinyoung Yeo
- **Korea Advanced Institute of Science and Technology (KAIST)** **Seoul, Korea**
M.S. in Artificial Intelligence *March 2023 –*
Advisor : Minjoon Seo

Publications

Peer-Reviewed Conference Papers.....

- **[C1]** *SG-MLP : Switch Gated Multi-Layer Perceptron Model for Natural Language Understanding*
Annual Conference of Korea Information Processing Society, 2021 (ACK 2021)
Guijin Son, **Seungone Kim**, Se June Joo, Woojin Cho, JeongEun Nah
[Paper] [Code]
- **[C2]** *Mind the Gap! Injecting Commonsense Knowledge for Abstractive Dialogue Summarization*
Proceedings of the 29th International Conference on Computational Linguistics (COLING 2022)
Seungone Kim*, Se June Joo*, Hyungjoo Chae*, Chaehyeong Kim*, Seungwon Hwang, Jinyoung Yeo
[Paper] [Code]

Preprints.....

- **[P1]** *Can Language Models perform Abductive Commonsense Reasoning?*
Seungone Kim
[Paper] [Code]

Research Experience

- **Yonsei University** **Seoul, Korea**
Internship at Soft Computing Laboratory *Apr 2021 – Aug 2021*
I have participated in 'Industry - University Assignments' between Yonsei University and Samsung Electronics Research. I have built a neural model that transforms documents into tabular data. I built the overall pipeline along with a demo system to test it out.
- **Seoul National University** **Seoul, Korea**
Research Internship at Language and Data Intelligence Laboratory *Sep 2021 – Jun 2022*

I have participated in a research project building a multilingual language model for low-resource languages via continual cross-lingual transfer during pre-training. Also, I have participated in the initial stage of building a Korean Language Model where I pre-trained a 11B sized decoder-only model with Korean text corpus from scratch.

- **Yonsei University** **Seoul, Korea**
Undergraduate Thesis advised by Conversational Intelligence Laboratory *Sep 2021 – Present*
I have published my undergraduate thesis at COLING 2022 (long) as a first author [C2]. I proposed a method that injects commonsense knowledge inferences to solve abstractive dialogue summarization.
- **Korea Advanced Institute of Science and Technology (KAIST)** **Seoul, Korea**
Research Internship at Language and Knowledge Laboratory *Jul 2022 – Jan 2023*
I participated in a research project building a distributed expert language model that tackles the weakness of Instruction-tuned LMs such as T0 and FLAN [O2]. This project is currently submitted to ICML 2023.

Technical and Personal skills

- **Programming Languages:** Python(Proficient), C++, C, Java
- **Frameworks / Software Skills:** PyTorch(Proficient), PyTorch Lightning(Proficient), Transformers(Proficient), FairSeq, Torch Geometric, NLTK, SpaCy
- **Software Skills:** Linux, Google Cloud Platform, Docker, L^AT_EX, Git, Wandb

Invited Talks

- **Commonsense Knowledge Consortium 1st Workshop**
Hosted by Il Chul Moon(KAIST), Chanyoung Park(KAIST), Jinyoung Yeo(Yonsei), Seungwon Hwang(SNU), Joseph Lim(KAIST), Jonghyeon Choi (Yonsei)
Presented about 'The Challenges in Commonsense Reasoning'
- **Yonsei University AI Workshop**
Hosted by Jonghyeon Choi (Yonsei)
Presented my paper accepted at COLING 2022[C2]

Services

- **Conference Reviewer:** EACL 2023

Honors and Awards

- **2018 Yonsei - Nexon RC Creative Platform Competition** **Yonsei University**
Won 5th place *December 2018*
Built an Internet Website that introduces about Korea to foreign transfer students. I've used ReactJS, NodeJS and SQLite.
- **Certificate of Achievement** **US Department of the Army**
Awarded as Sergeant *August 2020*
I have served as a KATUSA (Korean Army Augmented to United States Army) in January 2019 - August 2020. I worked at a office consisted of Chief Warrant Officers who would fly helicopters to move Generals across the peninsula.

- **Voice AI Challenge** **Seoul National University Hospital**
Made to the Finals (Top 10 teams) *October 2021*
 I fine-tuned a transformer based model with voice/audio data to detect the type of disease to assist doctors.
- **Excellence Award at Annual Conference of KIPS, 2021** **Korea Information Processing Society**
Marked as Top 8 papers *November 2021*
 Awarded with my paper at ACK 2021[C1].
- **Grand Prize in Graduation Capstone** **Yonsei University**
Marked as Top 3 projects *July 2022*
 Awarded with my paper at COLING 2022[C2].
- **Yonsei AI Workshop NLP Best Paper Award** **Samsung Electronics Research, Yonsei University**
Received Award as the only Undergraduate Student *October 2022*
 Awarded with my paper at COLING 2022[C2].
- **Semester Academic Excellence Scholarship** **Yonsei University**
Fall 2020, Spring 2021, Fall 2021, Spring 2022
- **High / Highest Academic Honors** **Yonsei University**
Fall 2020, Spring 2021, Spring 2022