YOONSANG LEE

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Research Interest	Natural Language Processing, Information Retrieval, In-Context Learning

Education

Seoul National University — Mar 2019 - Present
B.S. in Computer Science and Engineering — *Seoul, Korea*
B.S. in Mathematical Sciences

The University of Texas at Austin — Aug - Dec 2023
Exchange Student — *Austin, TX*

Gyeonggi Science High School for the Gifted — Mar 2016 - Feb 2019
High school for students specialized in mathematics and science — *Suwon, Korea*

Publications

Crafting In-context Examples according to LMs' Parametric Knowledge
Yoonsang Lee*, Pranav Atreya*, Xi Ye, Eunsol Choi, arXiv 2023

Enhancing Cross-Domain Generalization through Data Augmentation with Reduced Uncertainty
Yoonsang Lee*, Dongryeol Lee*, Kyomin Jung, EMNLP ArgMining 2023

*: equal contribution

Research Experience

UT Austin NLP Lab — Aug 2023 - Present
Research Assistant (Advisor: Dr. Eunsol Choi)
– Worked on project of various prompting strategies under multi-answer QA tasks, with focus on language model's parametric knowledge regarding in-context examples.

Language and Data Intelligence Lab — Jul - Oct 2023
Research Assistant (Advisor: Dr. Seungwon Hwang)

Machine Intelligence Lab, Seoul National University — Jul 2022 - Jul 2023
Research Assistant (Advisor: Dr. Kyomin Jung)
– Suggested ensemble schema to reduce uncertainty while performing data augmentation for pragmatic tagging. Ranked 1st on zero-shot track at ArgMining workshop.

Naver Clova AI Lab — Jan - Feb 2023
Research Intern
– Implemented causal deep learning with alternating transformer on common DAG datasets.

Projects

Private Mobile Chatbot Application — Spring 2023
– Developed android chatbot application for automatic and private response of customer complaints. Implemented with homomorphic encryption, MPNet, and ChatGPT.

Modality Translation through Conditional Encoder-Decoder — Spring 2023
– Designed general architecture that doesn't rely on specific latent encoder-decoder architecture and provides more accurate latent space prediction across different modalities.

NowSee, Real-time Weather Community   Fall 2022
– Developed web service for real-time weather community, where users can share live weather information and statistics.

Finding Abandoned Animals with Keywords   Summer 2019
– Developed precise search program for finding one's abandoned animal based on specified categories and similar keywords.

Collaborative Filtering Recommendation System Correcting User   Spring 2018
Bias Based on Comments-Rating Relationship
– Designed CNN based recommender system to unbias user ratings with movie comments.

Teaching Experience	Computer Architecture, *Teaching Assistant*	Spring 2023
	Electrical and Electronic Circuits, *Teaching Assistant*	Fall 2020
	Invited talk at SNUE Gifted Science Education Center	Spring, Fall 2019

Awards

SNU Semicon Scholarshp
Merit Based Scholarship
Silver, Korea Olympiad in Informatics
4th Place, Selected Topic Seminar 2 Presentation
Army Commendation Medal

Skills

Programming Languages C++, Java, Python, R, HTML/CSS, Javascript, Kotlin, SQL
Frameworks and Tools PyTorch, ReactJS, Tensorflow, Django, Git, Docker
Languages Korean (native), English (TOEFL 100 TOEIC 980)

Selected Coursework

Natural Language Processing, Information Retrieval and Web Search, Principles of Machine Learning, ML for Visual Understanding, Pattern Recognition, Language and Computer, Statistical Computing and Lab, Mathematical Analysis, Information Theory

Extracurricular	LikeLion at SNU	Mar - Nov 2022
	- Studied HTML/CSS, ReactJS, Django for web development	
	Sergeant, Korean Augmentaion to the US Army, *Camp Humphreys*	Dec 2020 - Jun 2022
	SAENA, SNU CLS Ambassador	Apr 2019 - Aug 2020
	Student Council, Department of Major and Autonomy	Mar - Nov 2019
	International Olympiad in Informatics Training Camp in Korea	Jul - Aug 2016, Jan 2017
	- Studied advanced data structures and algorithms	