Yoonsang Lee

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

Education

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

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

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

Research Experience

UT Austin NLP Lab, The University of Texas at Austin — Aug 2023 - Present
Research Assistant (Advisor: Dr. Eunsol Choi)

Language and Data Intelligence Lab, Seoul National University — 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.

Publications

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

Projects

Recontextualize, Revise and Retrieve [code] — Spring 2023
- Proposed novel method for recontextualizing and revising generated queries for dense retrieval. Achieved better performance compared to baseline.

Modality Translation through Conditional Encoder-Decoder [paper] — 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.

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

NowSee [poster] — Fall 2022
- Developed web service for real-time weather community, where users can share live weather information and statistics.

Finding Abandoned Animals with Keywords Broadcasted on EBS   Summer 2019
- Developed python program for finding one's abandoned animal based on specified categories and similar keywords, resulting precise search than official service.

Collaborative Filtering Recommendation System Correcting User   Spring 2018
Bias Based on Comments-Rating Relationship [paper]
- Suggested recommendation system using CNN trained by movie comments to unbias user ratings.

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

Awards	SNU Semicon Scholarshp
	Merit Based Scholarship
	SCSC TA Scholarship
	Silver, Korea Olympiad in Informatics
	4th Place, 2019 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	