Junggeun Do

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Research Interest

I am passionate about making people's lives better by developing explainable and interpretable deep learning models, primarily for tasks involving natural language processing. My research interests include incorporating realworld knowledge/constraints into deep learning models. I am broadly interested in **information retrieval**, open domain question answering and language modeling. I believe that by improving NLP systems, we can make information more accessible to people all over the world.

Education

Seoul National University

Double Major in Physics and Economics; Minor in Computer Science and Engineering

Mar 2015 - Aug 2024

Gyeonggi Science High School for the gifted

Mainly focused on physics

Feb 2012 - Feb 2015

Suwon, South Korea

Seoul, South Korea

Publication

[1] Junggeun Do, Jaeseong Lee and Seung-won Hwang. 2024. ContrastiveMix: Overcoming Code-Mixing Dilemma in Cross-Lingual Transfer for Information Retrieval. NAACL 2024 (short).

Experience

Structure & Knowledge Injection into Machine Learning Lab

Research Assistant (advisor: Jay-Yoon Lee)

Seoul National University

Jan 2024 - Present

• Exploring how to use energy network as a trainable loss function

Language & Data Intelligence Lab

Research Assistant (advisor: Seung-won Hwang)

Apr 2023 - Feb 2024

Seoul National University

- Explored to improve low-resource information retrieval • Explored to improve retrieval-based LM on ODQA

Gravity Labs Co., Ltd. (blockchain startup, raised \$2m to date)

Software Engineer, founding member

Sep 2022 - Mar 2023

Mar 2022 - Aug 2022

Seoul, South Korea

Developed mobile applications, websites and smart contracts

VoyagerX (AI-based startup raised \$27m from SoftBank, others)

Seoul, South Korea

- Deep Learning Engineer • Developed end-to-end text-to-speech synthesis models
 - Explored to develop photo-realistic hairstyle transfer models

Kakao Enterprise Corp.

Machine Learning Engineer Intern, AI Lab

Sep 2021 - Feb 2022

Seongnam, South Korea

- Explored low-resource domain adaptation for neural machine translation
- Explored to develop style-controllable neural machine translation models

Extracurricular

Military Service Feb 2020 - Sep 2021

Reserved Sergeant · Served as military driver and squad leader Republic of Korea Army

Undergraduate Students' Government

President

Seoul National University

• Worked as the president directly elected by all undergraduate students

Dec 2018 - Nov 2019

Teaching

Undergraduate TA Mar 2024 – Jun 2024

Data Structure Seoul National University

• Taught data structure with examples and answered students' questions

Undergraduate TA Mar 2024 – Jun 2024

Foundation of Physics 1

• Tutored undergraduate students with no background in physics

Scholarship and Award

Korea Student Aid Foundation

The Presidential Science Scholarship

 $Mar\ 2015-Feb\ 2020$

Seoul National University

Seoul National University

• Full tuition coverage for 4 years with stipend of 2.5 million KRW of support per semester

Samsung HumanTech Paper Award

Feb 2014

Samsung Electronics

Gyeonggi Science High School for the gifted

• Awarded a bronze prize for the paper titled "Method to increase efficiency of wireless transfer system based on magnetic resonance: single and multiple receivers."