Jaepill Choi

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in jaepillchoi

Research Interest

Natural Language Processing, Large Language Models, Deep Learning, Machine Learning

Education

Seoul National University, Seoul, South Korea

September 2022 - Present

M.S., Graduate School of Data Science

Learning and Adaptation Algorithms Lab (Advisor: Prof. Taesup Kim)

Yonsei University, Seoul, South Korea

March 2016 - August 2022

B.S., Department of Mechanical Engineering

• 2-years absence to fulfill military service (January 2017 - October 2018)

■ Publications

- Kyubyung Chae*, **Jaepill Choi***, Yohan Jo, Taesup Kim. "Mitigating Hallucination in Abstractive Summarization with Domain-Conditional Mutual Information", Findings of the Association for Computational Linguistics: NAACL 2024. (Accepted)
- Jaepill Choi, Kyubyung Chae, Jiwoo Song, Taesup Kim. "Fine-tuning Language Models to Alleviate Hallucinations in Abstractive Summarization", KCC 2024. (Accepted)
- Jaepill Choi, Kyubyung Chae, Jiwoo Song, Yohan Jo, Taesup Kim. "Model-based Preference Optimization in Abstractive Summarization without Human Feedback", EMNLP 2024. (Under Review)

*Equal Contribution

Research Experience

Learning and Adaptation Algorithms Lab December 2022 - Present

Advisor: Prof. Taesup Kim

Master Student

- Mitigating hallucination in Large Language Models (LLMs)
- Implemented alternative decoding strategies for LLMs to enhance factuality in summarization.
- Utilized Direct Preference Optimization (DPO) to train LLMs, reducing hallucinations in models.
- Cross-model transfer through multi-task learning
- Employed prompt-tuning techniques to facilitate cross-model transfer
- Trained a soft prompt projector using multi-task learning to enhance model compatibility

Multi-dimensional Insight Lab

December 2021 - March 2022

Advisor: Prof. Sanghoon Lee Undergraduate Research Intern

- 3D Avatar Modeling
- Utilized Marvelous Designer for avatar modeling
- Conducted research papers study on computer vision and 3D avatar

Work Experience

${\bf Samsung\ Biologics\ EPCV\ Center},\ {\bf Incheon},\ {\bf South\ Korea}$

July 2021 - August 2021

Undergraduate Intern

- Utilized AutoCAD for drawing organization and revision tasks in the Plant 4 construction project
- Conducted analysis and management of the HVAC system for Plant 4

Hyundai Motors Headquarter, Seoul, South Korea

November 2019 - December 2019

Human Resources Assistant

• Provided assistance with recruiting tasks

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Volunteer Experience

Elderly Education Volunteer

 $Technical\ educator$

• Provided technology education to elderly individuals at Gwanak social welfare center

2018 Pyeongchang Olympic Volunteer

January 2018 - March 2018

March 2023 - June 2023

Olympic VIP translator

- Translated for foreign VIP and visitors from all around the world
- Escorted IOC president, Thomas Bach

Yonsei-Incheon Teaching Volunteer

March 2016 - June 2016

High school student mentor

• Assisted students with their high school curriculum at Dong-Incheon high school

* Awards and Honors

Highest Honor, Yonsei University

Fall 2022

Honor, Yonsei University 3rd Prize, Creative Design Camp, Hongik University Certificate of Achievement, 2-2 AHB, 2ID, US Army Fall 2020, Fall 2021, Spring 2022 December 2021

October 2018

☐ Teaching Experience

Teaching Assistant, Seoul National University

September 2023 - December 2023

TA for Machine Learning and Deep Learning

- Developed a self-supervised learning assignment using CIFAR-10
- Provided support and answered questions related to the course

Samsung Future Maker Camp

December 2018

Mentor for middle school students

• Taught students autonomous driving coding for model cars using SCRATCH

Leadership Experience

Military Service for Republic of Korea

January 2017 - October 2018

Senior KATUSA, 2ID

- Served as ROKA Staff Office member at 2-2 AHB, 2ID
- Completed military service as Sergeant

Yonsei Exchange Club

March 2016 - June 2016

16th student president

• Responsible for organizing, creating and leading club activities

Skills

Languages Korean, English

Programming tools Python, C, C++, SQL, Matlab

Modeling Creo, AutoCAD

General Microsoft Office, LaTeX