

Jaepill Choi

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👤 Research Interest

Natural Language Processing, Large Language Models, Hallucination, Transfer Learning

🎓 Education

Seoul National University, Seoul, South Korea

September 2022 - August 2024

M.S., Graduate School of Data Science

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

Relevant Coursework:

- Machine Learning and Deep Learning for Data Science 1, 2
- Computing For Data Science 1, 2
- Conversational AI
- AI Model Consistency and Large Language Models

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.

• **Jaepill Choi**, Kyubyung Chae, Jiwoo Song, Taesup Kim. “Fine-tuning Language Models to Alleviate Hallucinations in Abstractive Summarization”, KCC 2024.

• **Jaepill Choi**, Kyubyung Chae, Jiwoo Song, Yohan Jo, Taesup Kim. “Model-based Preference Optimization in Abstractive Summarization without Human Feedback”, EMNLP 2024.

*Equal Contribution

🔧 Research Experience

Learning and Adaptation Algorithms Lab

December 2022 - August 2024

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**
 - Conducted research papers study on computer vision and 3D avatar

⚙️ Skills

Languages

Korean, English

Programming

Python, C++, C, SQL

Tools

HuggingFace, PyTorch, TensorFlow, Numpy, Pandas, Matplotlib

General

GitHub, LaTeX, Microsoft Office

Awards and Honors

Highest Honor , Yonsei University	<i>Fall 2022</i>
Honor , Yonsei University	<i>Fall 2020, Fall 2021, Spring 2022</i>
3rd Prize , Creative Design Camp, Hongik University	<i>December 2021</i>
Certificate of Achievement , 2-2 AHB, 2ID, US Army	<i>October 2018</i>

Leadership Experience

Yonsei Social Club <i>16th student president</i> <ul style="list-style-type: none">Responsible for organizing, creating and leading club activities	<i>September 2021 - February 2022</i>
Military Service for Republic of Korea <i>Senior KATUSA, 2ID</i> <ul style="list-style-type: none">Served as ROKA Staff Office member at 2-2 AHB, 2IDCompleted military service as Sergeant	<i>January 2017 - October 2018</i>

Teaching Experience

Teaching Assistant, Seoul National University <i>TA for Machine Learning and Deep Learning</i> <ul style="list-style-type: none">Developed a self-supervised learning assignment using CIFAR-10Provided support and answered questions related to the course	<i>September 2023 - December 2023</i>
Samsung Future Maker Camp <i>Mentor for middle school students</i> <ul style="list-style-type: none">Taught students autonomous driving coding for model cars using SCRATCH	<i>December 2018</i>

Volunteer Experience

Elderly Education Volunteer <i>Technical educator</i> <ul style="list-style-type: none">Provided technology education to elderly individuals at Gwanak social welfare center	<i>March 2023 - June 2023</i>
2018 Pyeongchang Olympic Volunteer <i>Olympic VIP translator</i> <ul style="list-style-type: none">Translated for foreign VIP and visitors from all around the worldEscorted IOC president, Thomas Bach	<i>January 2018 - March 2018</i>
Yonsei-Incheon Teaching Volunteer <i>High school student mentor</i> <ul style="list-style-type: none">Assisted students with their high school curriculum at Dong-Incheon high school	<i>March 2016 - June 2016</i>

Work Experience

Samsung Biologics EPCV Center , Incheon, South Korea <i>Undergraduate Intern</i> <ul style="list-style-type: none">Utilized AutoCAD for drawing organization and revision tasks in the Plant 4 construction projectConducted analysis and management of the HVAC system for Plant 4	<i>July 2021 - August 2021</i>
Hyundai Motors Headquarter , Seoul, South Korea <i>Human Resources Assistant</i> <ul style="list-style-type: none">Provided assistance with recruiting tasks	<i>November 2019 - December 2019</i>