



JIHYEON LEE

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Research Interests

- Large-scale Language Models
- Multimodal Learning (Image/video and text data; Video QA)
- De-biased Representation Learning (Robustness and Fairness issues on ML/DL models)
- Memory-augmented Language Models

Education

M.S. Artificial Intelligence, KAIST, Sungnam, Korea

Mar. 2020 –

Master of Artificial Intelligence (Candidate)

Present

- Advisor: Prof. Jaegul Choo

B.S., KAIST, Daejeon, Korea

Mar. 2014 –

Bachelor of Business and Technology Management, double major in Industrial Engineering

Feb. 2020

- Cumulative GPA: 3.7/4.3, cum laude
- Dean's List (Fall 2016)
- National Science and Engineering Scholarship (Full tuition, Mar. 2014 – Feb. 2018)

Exchange Student, TU Darmstadt, Hessen, Germany

Mar. 2017 –

Studied abroad for one year, took 7 courses in German and got 21 credits

Feb. 2018

- Main Coursework: Machine Learning, Operation Research, Entrepreneurship, Microeconomics

Publications

P1 E, Kim*, **J. Lee***, J. Choo. "Removing Dataset Bias with Bias-Tailored Swapping Augmentation". Proc. of the IEEE international conference on computer vision (**ICCV**), 2021, Accepted (25.9% acceptance rate)

P2 E.Kim, J. Lee, **J. Lee**, J. Choo. "Learning Debiased Representation via Disentangled Feature Augmentation". Conference on Neural Information Processing Systems (**NeurIPS**), 2021, Accepted as **Oral Presentation** (< 1% acceptance rate)

W1 **J. Lee***, Y. Tae*, T. Kim*, C. Park, J. Choo. "PePAL: Personalized Post-editing via Adversarial Learning using Cluster Label". (**Under Review**)

W2 **J. Lee***, W. Kang*, E. Kim. "Dense but Efficient VideoQA for Intricate Compositional Reasoning". (**Under Review**)

Research & Work Experience

Kakaobrain, Sunnam, Korea

AI Research Scientist

- Researched on efficient VideoQA problem (W2 in publications).
- Train and improve large-scale LM such as KoGPT

Jul. 2021 –
Present

Naver Papago, Sunnam, Korea

Research Collaborator

- Researched on personalized machine translation with real-world user data.
- Submitted paper at one of the top-tier AI conference (W1 in publications).

Jul. 2020 –
Feb. 2021

CLASSUM (Startup Company), Seoul, Korea

Data Analyst & Marketer

- Defined the useful raw data and KPI that should be tracked in the service, collected these data properly in the database, and made dashboard to analyze it easily.
- Planned and wrote code for marketing automation, such as email automation with GCP and tracking user events in web/app with analytics tools.
- Ran ads on Facebook and Google Ads in consideration of quantitative analysis to expand the business efficiently.

Feb. 2019 –
Dec. 2019

Music and Audio Computing Lab, KAIST, Daejeon, Korea

Lab Intern

- Audio-To-Score alignment of piano music using RNN-based automatic music transcription.
- Improved the pre-processing pipeline to create a MIDI file that accurately retains the characteristics of original audio file.

Aug. 2018 –
Sep. 2018

Teaching Experience

AI Workshop Instructor

- Samsung DS (AI Expert Program), instructing image captioning (Aug. 2020)
- SK Telecom (Advanced CDS Program), instructing image style transfer and sentiment analysis (Sep. 2020)
- KOSME (Korea Small & Medium Enterprises), mentoring on Kaggle competitions and instructing natural language processing (Dec. 2020 - Feb. 2021)

Skills & Personal Information

Languages

- Native Korean, Fluent in English (TOEIC 980, OPIC AL).

Dec. 1996 –
Present

Computer Skills

- Expert in deep learning frameworks, particularly in Pytorch.
- Expert in ML and Visualization libraries: OpenCV, Torchtext, Scikit-Learn and Matplotlib.
- Expert in Python, HTML and CSS.
- Intermediate in Javascript and MySQL.

Personality

- Self-assured, energetic, driven, unbiased, warm and smiling