SANG-WOO LEE

PERSONAL INFORMATION

· Technical Leader at Conversation Team, NAVER CLOVA
· Leader at Language Research Team, NAVER AI Lab
· Adjunct Professor, KAIST AI

· E-mail: sang.woo.lee@navercorp.com
· Webpage: https://sang-woo-lee.com
· Google Scholar: https://scholar.google.co.kr/citations?user=TMTTMuQAAAAJ

RESEARCH INTERESTS

Task-Oriented Dialog System, Language Model, Natural Language Processing

EDUCATION

Ph.D. in Computer Science and Engineering	Mar 2012 - Aug 2018
Seoul National University, Seoul, Republic of Korea	
B.S. in Computer Science and Engineering	Mar 2008 - Feb 2012
Seoul National University, Seoul, Republic of Korea	

WORK EXPERIENCE

NAVER Corp.	July 2018 - Present
· Team Leader at Language Research Team, NAVER AI Lab	April 2021 - Present
· Technical Leader at Conversation Team, NAVER CLOVA	May 2020 - Present
· Research Scientist at NAVER AI Lab	July 2018 - March 2021
· Project Initiator at AiCall, NAVER CLOVA	July 2018 - April 2020
KAIST AI	Oct 2021 - Present
· Adjunct Professor	
BoxLadder	Feb 2022 - Present
· Advisory Director	

RECENT PREPRINT

[1] Young-Ho Kim, Sungdong Kim, Minsuk Chang, **Sang-Woo Lee**. Leveraging Pre-Trained Language Models to Streamline Natural Language Interaction for Self-Tracking. *arXiv*. 2022.

[2] Jin-Hwa Kim, Yunji Kim, Jiyoung Lee, Kang Min Yoo, **Sang-Woo Lee**. Mutual Information Divergence: A Unified Metric for Multimodal Generative Models. *arXiv*. 2022.

[3] Junyeob Kim, Hyuhng Joon Kim, Hyunsoo Cho, Hwiyeol Jo, **Sang-Woo Lee**, Sang-goo Lee, Kang Min Yoo, Taeuk Kim. Ground-Truth Labels Matter: A Deeper Look into Input-Label Demonstrations. *arXiv*. 2022.

CONFERENCE

[1] Xiaodong Gu, Zhaowei Zhang, **Sang-Woo Lee**, Kang Min Yoo, Jung-Woo Ha. Continuous Decomposition of Granularity for Neural Paraphrase Generation. In *COLING* (to appear). 2022.

[2] Reinald Kim Amplayo, Kang Min Yoo, **Sang-Woo Lee**. Attribute Injection for Pretrained Language Models: A New Benchmark and An Efficient Method. In *COLING* (to appear). 2022.

[3] Sanghwan Bae, Donghyun Kwak, Sungdong Kim, Donghoon Ham, Soyoung Kang, **Sang-Woo Lee**, Woomyoung Park. Building a Role Specified Open-Domain Dialogue System Leveraging Large-Scale Language Models. In *NAACL*. 2022.

[4] Seongjin Shin*, **Sang-Woo Lee***, Hwijeen Ahn, Sungdong Kim, HyoungSeok Kim, Boseop Kim, Kyunghyun Cho, Gichang Lee, Woomyoung Park, Jung-Woo Ha. On the Effect of Pretraining Corpora on In-context Learning by a Large-scale Language Model. In *NAACL*. 2022.

[5] Kyungjae Lee, Wookje Han, Seung-Won Hwang, Hwaran Lee, Joonsuk Park, **Sang-Woo Lee**. Continual Plug-and-Adapt for CuQA. In *Findings of ACL*. 2022.

[6] Yeon Seonwoo, Juhee Son, Jiho Jin, **Sang-Woo Lee**, Ji-Hoon Kim, Jung-Woo Ha, Alice Oh. Two-Step Question Retrieval for Open-Domain QA. In *Findings of ACL*. 2022.

[7] Boseop Kim*, HyoungSeok Kim*, **Sang-Woo Lee***, Gichang Lee, Donghyun Kwak, Dong Hyeon Jeon, Sunghyun Park, Sungju Kim, Seonhoon Kim, Dongpil Seo, Heungsub Lee, Minyoung Jeong, Sungjae Lee, Minsub Kim, Suk Hyun Ko, Seokhun Kim, Taeyong Park, Jinuk Kim, Soyoung Kang, Na-Hyeon Ryu, Kang Min Yoo, Minsuk Chang, Soobin Suh, Sookyo In, Jinseong Park, Kyungduk Kim, Hiun Kim, Jisu Jeong, Yong Goo Yeo, Donghoon Ham, Dongju Park, Min Young Lee, Jaewook Kang, Inho Kang, Jung-Woo Ha, Woomyoung Park, Nako Sung. **What Changes Can Large-scale Language Models Bring? Intensive Study on HyperCLOVA: Billions-scale Korean Generative Pretrained Transformers**. In *EMNLP*. 2021.

[8] Kang Min Yoo, Dongju Park, Jaewook Kang, **Sang-Woo Lee**, Woomyeong Park. **GPT3Mix: Leveraging Large-scale Language Models for Text Augmentation**. In *Findings of EMNLP*. 2021.

[9] Sungdong Kim, Minsuk Chang, **Sang-Woo Lee**. **NeuralWOZ: Learning to Collect Task-Oriented Dialogue via Model-based Simulation**. In *ACL*. 2021.

[10] Yeon Seonwoo, **Sang-Woo Lee**, Ji-Hoon Kim, Jung-Woo Ha, Alice Oh. **Weakly Supervised Pre-Training for Multi-hop Retriever**. In *Findings of ACL*. 2021.

[11] Minjeong Kim, Gyuwan Kim, **Sang-Woo Lee**, Jung-Woo Ha. **ST-BERT: Cross-modal Language Model Pre-training For End-to-end Spoken Language Understanding**. In *ICCASP*. 2021.

[12] Jung-Woo Ha*, Kihyun Nam*, Jin Gu Kang, **Sang-Woo Lee**, Sohee Yang, Hyunhoon Jung, Eunmi Kim, Hyeji Kim, Soojin Kim, Hyun Ah Kim, Kyoungtae Doh, Chan Kyu Lee, Sunghun Kim. **ClovaCall: Korean Goal-oriented Dialog Speech Corpus for Automatic Speech Recognition of Contact Centers**. In *Interspeech*. 2020.

[13] Sungdong Kim, Sohee Yang, Gyuwan Kim, **Sang-Woo Lee**. **Efficient Dialogue State Tracking by Selecitvely Overwriting Memory**. In *ACL*. 2020.

[14] **Sang-Woo Lee**, Tong Gao, Sohee Yang, Jaejun Yoo, Jung-Woo Ha. **Large-Scale Answerer in Questioner's Mind for Visual Dialog Question Generation**. In *ICLR*. 2019.

[15] **Sang-Woo Lee**, Yujung Heo, Byoung-Tak Zhang. **Answerer in Questioner's Mind: Information Theoretic Approach to Goal-oriented Visual Dialog**. In *NeurIPS*. 2018. (Spotlight)

[16] **Sang-Woo Lee**, Jin-Hwa Kim, Jaehyun Jun, Jung-Woo Ha, Byoung-Tak Zhang. **Overcoming Catastrophic Forgetting by Incremental Moment Matching**. In *NIPS*. 2017. (Spotlight)

[17] Jin-Hwa Kim, **Sang-Woo Lee**, Dong-Hyun Kwak, Min-Oh Heo, Jeonghee Kim, Jung-Woo Ha, Byoung-Tak Zhang. **Multimodal Residual Learning for Visual QA**. In *NIPS*. 2016.

[18] **Sang-Woo Lee**, Chung-Yeon Lee, Dong-Hyun Kwak, Jiwon Kim, Jeonghee Kim, and Byoung-Tak Zhang. **Dual Memory Architectures for Lifelong Learning of Everyday Human Behaviors**. In *IJCAI*. 2016.

JOURNAL

[1] Christina Baek, **Sang-Woo Lee**, Beom-Jin Lee, Dong-Hyun Kwak, Byoung-Tak Zhang. **Enzymatic Weight Update Algorithm for DNA-based Molecular Learning**. *Molecules*, 24(7):1409. 2019.

[2] **Sang-Woo Lee**, Chung-Yeon Lee, Dong-Hyun Kwak, Jung-Woo Ha, Jeonghee Kim, and Byoung-Tak Zhang. **Dual-memory Neural Networks for Modeling Cognitive Activities of Humans via Wearable Sensors**. *Neural Networks*, 92:17-28. 2017.

PROJECTS

HyperCLOVA Jan 2021 - Present
· NAVER AI NOW [Videos]

CCAI July 2018 - Present
· AiCall (DUET) [Demo] [JP Video] [KR Video]

SCHOLARSHIPS

Presidential Science Scholarship, Korea Student Aid Foundation 2008 - 2012

TEACHING EXPERIENCE

Instructor
Korea Advanced Institute of Science and Technology (KAIST)
· Special Topics in Machine Learning: Deep Learning and Real-world Applications Mar - June 2022

Teaching Assistant
Seoul National University
· Introduction to Deep Learning Mar 2018 - June 2018
· Machine Learning Sep 2016 - Dec 2016
· Machine Learning Sep 2013 - Dec 2013
· Artificial Intelligence Mar 2013 - June 2013

Teaching Assistant
Samsung Advanced Technology Training Institute
· Machine Learning July 2014
· Machine Learning Practice Mar 2014