Gi-Cheon Kang

CONTACT INFORMATION

205, Building 942
Seoul National University
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Seoul 08826, Republic of Korea

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EDUCATION

Seoul National University, Seoul, Korea — Sept. 2020 – Present
Ph.D. Student in Artificial Intelligence
Advisor: Prof. Byoung-Tak Zhang

Seoul National University, Seoul, Korea — Mar. 2018 – Feb. 2020
M.S. in Cognitive Science
Advisor: Prof. Byoung-Tak Zhang
Thesis: Deep Representation Learning for Visually-Grounded Dialogue

Ajou University, Suwon, Korea — Mar. 2011 – Feb. 2018
B.S. in Software and Computer Engineering

INTERESTS

Machine Learning, Natural Language Processing, Computer Vision

SELECTED PUBLICATIONS

[6] **C^3: Contrastive Learning for Cross-domain Correspondence in Few-shot Image Generation**
Hyukgi Lee, Gi-Cheon Kang, Chang-Hoon Jeong, Hanwool Sul, and Byoung-Tak Zhang
NeurIPS Workshop on Controllable Generative Modeling in Language and Vision (NeurIPSW), 2021

[5] **Reasoning Visual Dialog with Sparse Graph Learning and Knowledge Transfer**
Gi-Cheon Kang, Junseok Park, Hwaran Lee, Byoung-Tak Zhang*, and Jin-Hwa Kim*
Findings of Empirical Methods in Natural Language Processing (Findings of EMNLP), 2021

[4] **Attend What You Need: Motion-Appearance Synergistic Networks for Video Question Answering**
Ahjeong Seo, Gi-Cheon Kang, Joonhan Park, and Byoung-Tak Zhang
Annual Meeting of the Association for Computational Linguistics (ACL), 2021

[3] **Label Propagation Adaptive Resonance Theory for Semi-Supervised Continuous Learning**
Taehyeong Kim, Injune Hwang, Gi-Cheon Kang, Won-Seok Choi, Hyunseo Kim, Byoung-Tak Zhang
IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2020

[2] **Dual Attention Networks for Visual Reference Resolution in Visual Dialog**
Gi-Cheon Kang, Jaeseo Lim, and Byoung-Tak Zhang
Empirical Methods in Natural Language Processing (EMNLP), 2019

[1] **Contextualized Bilinear Attention Networks**
Gi-Cheon Kang, Seonil Son, and Byoung-Tak Zhang
ECCV Workshop on VizWiz Grand Challenge (ECCVW), 2018

* : equal contribution

HONORS & AWARDS

Best Paper Award @ Korea Software Congress (KSC) — Dec. 2019
Ranked 3rd Place, Visual Dialog Challenge @ CVPR 2019 — June 2019
Software-Centered University Hackathon, Prize from Microsoft Korea — Sept. 2017
Yeoju Honor Scholarship — May 2016

RESEARCH EXPERIENCE

AI Institute for SNU (AIIS), Seoul, Korea — Summer 2020 – Present
Research Assistant
Advisor: Prof. Byoung-Tak Zhang
I have studied "grounded language learning" which aims to connect language to non-linguistic experiences such as sensory perception and action.

NAVER AI Lab, Seoul, Korea — Summer 2021 – Present
Student Researcher
With Jin-Hwa Kim, Sungdong Kim, and Donghyun Kwak
Working on the multi-agent systems that perform the grounded collaborative dialogue.

SK Telecom AI Center, Seoul, Korea — Spring 2020
Research Intern
With Jin-Hwa Kim and Hwaran Lee
Developed Sparse Graph Learning (SGL) algorithm that discovers inherently sparse semantic structures of the human conversation. Published at Findings of EMNLP 2021.

Seoul National University, Seoul, Korea — Mar. 2018 – Feb. 2020
Research Assistant
Advisor: Prof. Byoung-Tak Zhang
Studied the machine learning algorithms for the visually-grounded dialogue systems. We proposed Dual Attention Networks for the question disambiguation and visual groundings. Published at EMNLP 2019.

RESEARCH PROJECTS

Video Turing Test (VTT): The Video Turing Test desires to test a machine's ability of intelligent behavior in regards to observing and understanding video input and thereby its video intelligence. A machine capable of this task would prove human-like video understanding capabilities that could open the world of AI to a whole new possibilities in human-like long-term adaptive learning.

Machine Learning for Home Appliances, LG Electronics: Industry-Academia Cooperative Research with LG Electronics. Optimizing a motor control of an electric washing machine using ML technique.

INVITED TALKS

Dual Attention Networks for Visual Reference Resolution in Visual Dialog
ICCV 2019 - Video Turing Test Workshop **(Spotlight)** — Nov. 2019
SK Telecom AI Center — Sept. 2019

Reasoning Visual Dialog with Sparse Graph Learning and Knowledge Transfer
Annual Conference on Human and Cognitive Language Technology — Oct. 2021

EXTRA CURRICULAR ACTIVITIES

BI Lab Conference Deadline Site Administrator — 2018 – Present
Military Service in Republic of Korea Army — 2012 – 2014