# **Gi-Cheon Kang**

**CONTACT** INFORMATION 205, Building 942

Seoul National University

1, Gwanak-ro, Gwanak-gu, Seoul 08826, Republic of Korea

**EDUCATION** 

Seoul National University, Seoul, Korea

Ph.D. Student in Artificial Intelligence

Advisor: Prof. Byoung-Tak Zhang

Seoul National University, Seoul, Korea

M.S. in Cognitive Science Mar. 2018 - Feb. 2020

Advisor: Prof. Byoung-Tak Zhang

Ajou University, Suwon, Korea

B.S. in Software and Computer Engineering Mar. 2011 - Feb. 2018

**INTERESTS** 

Machine Learning, Natural Language Processing, Computer Vision

# PUBLICATIONS [6] 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 the Empirical Methods in Natural Language Processing (Findings of EMNLP), 2021

[5] 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

#### [4] 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

# [3] 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

## [2] Contextualized Bilinear Attention Networks

Gi-Cheon Kang, Seonil Son, and Byoung-Tak Zhang ECCV Workshop on VizWiz Challenge, (ECCVW), 2018

### RESEARCH **EXPERIENCE**

#### AI Institute for SNU (AIIS)

Seoul, Korea

Research Assistant

Summer 2020 - Present

email: chonkang@snu.ac.kr

website: gicheonkang.com

Sept. 2020 – Present

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.

**SK Telecom AI Center** 

Seoul, Korea Spring 2020

Research Intern

Mentor: Jin-Hwa Kim and Hwaran Lee

Worked the graph neural network-based algorithms for visually-grounded dialogue. We proposed Sparse Graph Learning (SGL) algorithm that discovers inherently sparse structures of the human dialogue. Published at Findings of EMNLP 2021.

<sup>\*:</sup> equal contribution

**Seoul National University (SNU)** 

Seoul, Korea Mar. 2018 – Feb. 2020 Research Assistant

Advisor: Prof. Byoung-Tak Zhang

Studied the machine learning algorithms for visually-grounded dialogue system. For the visual dialog dataset, we proposed Dual Attention Networks for the question disambiguation and visual groundings. Published at EMNLP 2019.

**HONORS & AWARDS** 

Ranked 3rd Place, Visual Dialog Challenge @ CVPR 2019 June 2019 Software-Centered University Hackathon, Prize from Microsoft Korea Sept. 2017 May 2016 Yeoju Honor Scholarship

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

2018 - Present

2012 - 2014

**EXTRA CURRICULAR ACTIVITIES** 

BI Lab Conference Deadline Site Administrator Military Service in Republic of Korea Army