# **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

Advisor: Prof. Byoung-Tak Zhang

Thesis: Deep Representation Learning for Visually-Grounded Dialogue

Ajou University, Suwon, Korea

B.S. in Software and Computer Engineering

**INTERESTS** 

Machine Learning, Natural Language Processing, Computer Vision

## PUBLICATIONS [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 the 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

## RESEARCH **EXPERIENCE**

AI Institute for SNU (AIIS)

Seoul, Korea

Summer 2020 - Present

email: chonkang@snu.ac.kr

website: gicheonkang.com

Sept. 2020 – Present

Mar. 2018 - Feb. 2020

Mar. 2011 - Feb. 2018

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.

## **SNU-NAVER Hyperscale AI Center**

Seoul, Korea

Student Researcher

Research Assistant

Summer 2021 - Present

Working on the multi-agent systems that perform the grounded collaborative dialogue.

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

**SK Telecom AI Center**Research Intern

Seoul, Korea

Spring 2020

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 (SNU)**

Seoul, Korea

Research Assistant

Mar. 2018 – Feb. 2020

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.

HONORS &	Best Paper Award @ Korea Software Congress (KSC)	Dec. 2019
AWARDS	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 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	Dual Attention Networks for Visual Reference Resolution in Visual Dialog	
TALKS	ICCV 2019 - Video Turing Test Workshop (Spotlight)	Nov. 2019
	SK Telecom AI Center	Sept. 2019

EXTRA	BI Lab Conference Deadline Site Administrator	2018 – Present
CURRICULAR	Military Service in Republic of Korea Army	2012 - 2014
ACTIVITIES	•	