Gi-Cheon Kang

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EDUCATION

Seoul National University 2020 – 2025
Ph.D. in Artificial Intelligence
Advisor: Byoung-Tak Zhang
Thesis: Embodied language agents for real-world robotic tasks: visually-grounded interaction & skill learning

Seoul National University 2018 – 2020
M.S. in Cognitive Science
Advisor: Byoung-Tak Zhang

Ajou University 2011 – 2018
B.Eng. in Software and Computer Engineering

INTERESTS

Machine Learning, Robot Learning, Embodied & Multimodal AI

- **Robotics Foundation Models**: Building vision-language-action (VLA) models for generalist robot policies, with a focus on grounding web-scale knowledge to robotic control.
- **Embodied Reasoning**: Investigating vision-language models (VLMs) for task planning and reasoning about language instructions in physical environments.
- **Vision & Language**: Developing interactive VLMs that engage in continuous, grounded communication with humans about images and videos

EXPERIENCE

SNU AI Institute Seoul
Postdoctoral Fellow 2025 – 2026
Hosts: Jun Ki Lee and Byoung-Tak Zhang
Project: Vision-language-action (VLA) models for robot manipulation (RSS 2025)

NAVER AI Seoul
Student Researcher Summer 2022
Hosts: Jin-Hwa Kim, Sungdong Kim, and Donghyun Kwak
Project: Semi-supervised learning for visual dialog (CVPR 2023)

Seoul National University Seoul
Graduate Research Assistant 2020 – 2025
Advisor: Byoung-Tak Zhang
Project: Machine learning algorithms for multimodal and embodied AI

SK T-Brain Seoul
Research Intern Winter 2020
Hosts: Jin-Hwa Kim and Hwaran Lee
Project: Discovering sparse structures in visual dialog (EMNLP 2021)

HONORS & AWARDS

RSS Pioneers | *Top 33 early-career researchers in robotics worldwide (acceptance rate: 14%)*	2025
Youlchon AI Star Fellowship | *Awarded to 10 PhD students for excellence in core AI research*	2024
IPAI Ph.D. Fellowship	2024
Daeha Scholarship	2022
3rd Place, Visual Dialog Challenge @ CVPR 2019	2019
Software-Centered University Hackathon, Prize from Microsoft Korea	2017
Yeoju Honor Scholarship	2016

SELECTED PUBLICATIONS
(* denotes equal contribution)

PEER-REVIEWED CONFERENCE PAPERS

[1] **Continual Vision-and-Language Navigation**
Seongjun Jeong, Gi-Cheon Kang, Seongho Choi, Joochan Kim, Byoung-Tak Zhang
The British Machine Vision Conference (BMVC), 2025

[2] **CLIP-RT: Learning Language-Conditioned Robotic Policies from Natural Language Supervision**
Gi-Cheon Kang*, Junghyun Kim*, Kyuhwan Shim, Jun Ki Lee, Byoung-Tak Zhang
Robotics: Science and Systems (RSS), 2025

[3] **Socratic Planner: Self-QA-Based Zero-Shot Planning for Embodied Instruction Following**
Suyeon Shin, Sujin Jeon*, Junghyun Kim*, Gi-Cheon Kang*, Byoung-Tak Zhang
IEEE International Conference on Robotics and Automation (ICRA), 2025

[4] **PGA: Personalizing Grasping Agents with Single Human-Robot Interaction**
Junghyun Kim, Gi-Cheon Kang*, Jaein Kim*, Seoyoon Yang, Minjoon Jung, Byoung-Tak Zhang
IEEE/RSJ International Conference on Intelligent Robots and Systems, (IROS), 2024

[5] **PROGrasp: Pragmatic Human-Robot Communication for Object Grasping**
Gi-Cheon Kang, Junghyun Kim, Jaein Kim, Byoung-Tak Zhang
IEEE International Conference on Robotics and Automation (ICRA), 2024 **(Oral)**

[6] **The Dialog Must Go On: Improving Visual Dialog via Generative Self-Training**
Gi-Cheon Kang, Sungdong Kim*, Jin-Hwa Kim*, Donghyun Kwak*, Byoung-Tak Zhang
IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2023

[7] **GVCCI: Lifelong Learning of Visual Grounding for Language-Guided Robotic Manipulation**
Junghyun Kim, Gi-Cheon Kang*, Jaein Kim*, Suyeon Shin, Byoung-Tak Zhang
IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2023 **(Oral)**

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

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

[10] **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

[11] **Dual Attention Networks for Visual Reference Resolution in Visual Dialog**
Gi-Cheon Kang, Jaeseo Lim, Byoung-Tak Zhang
Conference on Empirical Methods in Natural Language Processing (EMNLP), 2019
ICCV Workshop on Video Turing Test (VTT), 2019 **(Spotlight)**

WORKSHOP PAPERS

[12] **Language-Driven Robotics: Learning and Interaction**
Gi-Cheon Kang
RSS Pioneers Workshop (RSSW), 2025

[13] **Generative Self-training Improves Pre-training for Visual Dialog**
Gi-Cheon Kang, Sungdong Kim*, Jin-Hwa Kim*, Donghyun Kwak*, Byoung-Tak Zhang
ICML Workshop on Pre-training: Perspectives, Pitfalls, and Paths Forward (ICMLW), 2022

[14] **Improving Robustness to Texture Bias via Shape-focused Augmentation**
Sangjun Lee, Inwoo Hwang, Gi-Cheon Kang, Byoung-Tak Zhang
CVPR Workshop on Human-centered Intelligent Services: Safety and Trustworthy (CVPRW), 2022

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

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

INVITED TALKS	*CLIP-RT: Learning Language-Conditioned Robotic Policies from Natural Language Supervision*	
	Robotics: Science and Systems (RSS)	June 2025
	Foundation Models for Robotics: Learning and Interaction	
	Robotics: Science and Systems (RSS) Pioneers Workshop	June 2025
	Vision-Language-Action Models for Robotic Manipulation	
	Korea Robotics Society (KROS) Workshop on Mobile Manipulation	May 2025
	PROGrasp: Pragmatic Human-Robot Communication for Object Grasping	
	IEEE International Conference on Robotics and Automation (ICRA)	May 2024
	The Evolution of Language Models: From Basic NLP to ChatGPT and Beyond	
	Dept. of Energy Resources Engineering, Seoul National University	Nov. 2023
	The Dialog Must Go On: Improving Visual Dialog via Generative Self-Training	
	IEEE RO-MAN Workshop on Learning by Asking for Intelligent Robots and Agents	Aug. 2023
	Reasoning Visual Dialog with Sparse Graph Learning and Knowledge Transfer	
	KSC 2021—Top-tier Conference Paper Presentation Session	Dec. 2021
	Annual Conference on Human and Cognitive Language Technology	Oct. 2021
	Dual Attention Networks for Visual Reference Resolution in Visual Dialog	
	ICCV 2019 - Video Turing Test Workshop	Nov. 2019
	SK Telecom AI Center	Sept. 2019

SERVICES	**Reviewing**	
	Conference on Neural Information Processing Systems (NeurIPS)	2023 – 2025
	International Conference on Machine Learning (ICML)	2024 – 2025
	International Conference on Learning Representations (ICLR)	2024 – 2025
	IEEE Transactions on Robotics (T-RO)	2025
	IEEE Robotics and Automation Letters (RA-L)	2024
	IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)	2024
	AAAI Conference on Artificial Intelligence (AAAI)	2025
	ACL Rolling Review (ARR)	2024 – 2025
	Annual Meeting of the Association for Computational Linguistics (ACL)	2023 – 2024
	Empirical Methods in Natural Language Processing (EMNLP)	2022 – 2023

EXTRA CURRICULAR ACTIVITIES	BI Lab Tennis Club	2023 – 2025
	Military Service in Republic of Korea Army	2012 – 2014