

Gi-Cheon Kang

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EDUCATION	Seoul National University Ph.D. in Artificial Intelligence <i>Advisor: Prof. Byoung-Tak Zhang</i> <i>Thesis: Embodied language agents for real-world robotic tasks: visually-grounded interaction & skill learning</i>	Seoul, Korea Sept. 2020 – Feb. 2025
	Seoul National University M.S. in Cognitive Science <i>Advisor: Prof. Byoung-Tak Zhang</i>	Seoul, Korea Mar. 2018 – Feb. 2020
	Ajou University B.Eng. in Software and Computer Engineering	Suwon, Korea Mar. 2011 – Feb. 2018
INTERESTS	Machine Learning, Robot Learning, Embodied & Multimodal AI <ul style="list-style-type: none">• Robotics Foundation Models: Developing vision-language-action (VLA) models to learn generalist robot policies• Embodied Reasoning: Studying vision-language models (VLMs) for reasoning about language instructions and task plans• Vision & Language: Building interactive vision-language models (VLMs) that can continuously communicate with humans about images and videos	
EXPERIENCE	AI Institute for SNU (AIIS) Postdoctoral Fellow <i>Hosts: Jun Ki Lee and Byoung-Tak Zhang</i> Working on vision-language-action (VLA) models for generalist robot policies. A recent VLA work will appear at RSS 2025.	Seoul, Korea March. 2025 – Current
	SNU-NAVER Hyperscale AI Center Student Researcher <i>Hosts: Jin-Hwa Kim, Sungdong Kim, and Donghyun Kwak</i> Studied a semi-supervised learning approach for visual dialog. Published at CVPR 2023.	Seoul, Korea Sept. 2021 – May 2022
	Seoul National University (SNU) Research Assistant <i>Advisor: Byoung-Tak Zhang</i> I have studied machine learning algorithms that connect natural language to perception and action. Developed interactive robots, grasping desired objects through dialog with users (ICRA 2024 Oral) and a lifelong learning framework for robots to adapt to real-world environments without human supervision (IROS 2023 Oral).	Seoul, Korea Sept. 2020 – Feb. 2025
	SK T-Brain Research Intern <i>Hosts: Jin-Hwa Kim and Hwaran Lee</i> Worked on discovering sparse structures in visual dialog. Published at Findings of EMNLP 2021.	Seoul, Korea Jan. 2020 - March. 2020
	HONORS & AWARDS	
	RSS Pioneers <i>Top early-career researchers in robotics (area: robot learning & foundation models)</i>	2025
	Youlchon AI Star Fellowship <i>Awarded to 10 PhD students for excellence in core AI research</i>	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] **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
- [2] **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
- [3] **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
- [4] **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)**
- [5] **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
- [6] **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)**
- [7] **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
- [8] **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
- [9] **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
- [10] **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

- [11] **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

- [12] **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
- [13] **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
- [14] **Contextualized Bilinear Attention Networks**
Gi-Cheon Kang, Seonil Son, Byoung-Tak Zhang
ECCV Workshop on VizWiz Grand Challenge (ECCVW), 2018

PREPRINTS

- [15] **Continual Vision-and-Language Navigation**
Seongjun Jeong, Gi-Cheon Kang, Seongho Choi, Joochan Kim, Byoung-Tak Zhang
arXiv Preprint, 2024

INVITED TALKS	<i>PROGrasp: Pragmatic Human-Robot Communication for Object Grasping</i> IEEE International Conference on Robotics and Automation (ICRA)	May 2024
	<i>The Evolution of Language Models: From Basic NLP to ChatGPT and Beyond</i> Dept. of Energy Resources Engineering, Seoul National University	Nov. 2023
	<i>The Dialog Must Go On: Improving Visual Dialog via Generative Self-Training</i> IEEE RO-MAN Workshop on Learning by Asking for Intelligent Robots and Agents	Aug. 2023
	<i>Reasoning Visual Dialog with Sparse Graph Learning and Knowledge Transfer</i> KSC 2021 - Top-tier Conference Paper Presentation Session	Dec. 2021
	<i>Annual Conference on Human and Cognitive Language Technology</i>	Oct. 2021
SERVICES	<i>Dual Attention Networks for Visual Reference Resolution in Visual Dialog</i> ICCV 2019 - Video Turing Test Workshop	Nov. 2019
	SK Telecom AI Center	Sept. 2019
	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
	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	IEEE Robotics and Automation Letters (RA-L)	2024
	IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)	2024
	BI Lab Tennis Club	2023 – Present
	BI Lab Conference Deadline Site Administrator	2018 – Present
	Military Service in Republic of Korea Army	2012 – 2014