

# Gi-Cheon Kang

website: gicheonkang.com  
email: chonkang@snu.ac.kr

EDUCATION	<b>Seoul National University</b> 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 &amp; skill learning</i>	Seoul, Korea Sept. 2020 – Feb. 2025
	<b>Seoul National University</b> M.S. in Cognitive Science <i>Advisor: Prof. Byoung-Tak Zhang</i>	Seoul, Korea Mar. 2018 – Feb. 2020
	<b>Ajou University</b> 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"><li>• <b>Robotics Foundation Models:</b> Developing vision-language-action (VLA) models that learn generalist robot policies</li><li>• <b>Embodied Reasoning:</b> Studying vision-language models (VLMs) for reasoning about language instructions and task plans</li><li>• <b>Vision &amp; Language:</b> Building interactive vision-language models (VLMs) that can continuously communicate with humans about images and videos</li></ul>	
EXPERIENCE	<b>AI Institute for SNU (AIIS)</b> Postdoctoral Fellow <i>Hosts: Jun Ki Lee and Byoung-Tak Zhang</i> Studying foundation models for humanoid robots. Published at RSS 2025.	Seoul, Korea March. 2025 – Current
	<b>SNU-NAVER Hyperscale AI Center</b> 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
	<b>Seoul National University (SNU)</b> 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
	<b>SK T-Brain</b> 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
	<b>HONORS &amp; AWARDS</b>	
	<b>RSS Pioneers   Top 33 early-career researchers in robotics</b>	2025
	<b>Youlchon AI Star Fellowship</b>	2024
	<b>IPAI Ph.D. Fellowship</b>	2024
	<b>Daeha Scholarship</b>	2022
	<b>3rd Place, Visual Dialog Challenge @ CVPR 2019</b>	2019
	<b>Software-Centered University Hackathon, Prize from Microsoft Korea</b>	2017
	<b>Yeoju Honor Scholarship</b>	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
	<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

SERVICES	<b>Reviewing</b>	
	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
	IEEE Robotics and Automation Letters (RA-L)	2024
	IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)	2024

EXTRA	BI Lab Tennis Club	2023 – Present
CURRICULAR	BI Lab Conference Deadline Site Administrator	2018 – Present
ACTIVITIES	Military Service in Republic of Korea Army	2012 – 2014