

Nuri Kim

CONTACT INFORMATION	Department of Electronics Engineering Jeonbuk National University Webpage / Bio / Google Scholar LinkedIn / GitHub / Twitter	Phone: +82-10-6540-7515 E-mail: anuri0906@gmail.com Scopus Id: 57207942936
CITIZENSHIP	Republic of Korea	
RESEARCH INTERESTS	Deep Reinforcement Learning, Computer Vision, Robotics.	
EDUCATION	Seoul National University , Seoul, South Korea • Ph.D. Thesis: Robust Semantic Visual Graphs for Navigation of Embodied Agents • Advisor: Prof. Songhwai Oh	Mar. 2016 - Feb. 2023
	Australian National University , Canberra, Australia • Overseas Study Program in Electrical Engineering	Jul. 2014 - Nov. 2014
	Korea University , Seoul, South Korea • B.S. in Electrical Engineering (<i>Cum Laude</i>)	Mar. 2012 - Feb. 2016 GPA: 4.2/4.5, Major: 4.4/4.5
RESEARCH EXPERIENCE	Department of Electronics Engineering, Jeonbuk National University • Assistant Professor	Mar. 2025 - Present
	Computer Vision Lab, Samsung Advanced Institute of Technology (SAIT) • Staff researcher	Mar. 2023 - Feb. 2025
	Robot Learning Laboratory, SNU (Advisor: Prof. Songhwai Oh) • Graduate researcher	Mar. 2016 - Feb. 2023
	HandS (Hardware and Software research club) • Member • Team leader	Mar. 2014 - Dec. 2015 Jan. 2015 - Dec. 2015
INTERNATIONAL JOURNAL	Nuri Kim , Jeongho Park, Mineui Hong, and Songhwai Oh, “ Semantic Environment Atlas for Object-Goal Navigation ”, <i>Knowledge-Based Systems</i> , vol. 304, article 112446, Nov. 2024.	
	Nuri Kim , Donghoon Lee, and Songhwai Oh, “ Learning Instance-Aware Object Detection Using Determinantal Point Processes ”, <i>Computer Vision and Image Understanding</i> (CVIU), vol. 201, article 103061, Dec 2020.	
	Hyemin Ahn, Sungjoon Choi, Nuri Kim , Geonho Cha, and Songhwai Oh, “ Interactive Text2Pickup Networks for Natural Language based Human-Robot Collaboration ,” <i>IEEE Robotics and Automation Letters</i> (RA-L), vol. 3, no. 4, pp. 3308–3315, Oct 2018.	
INTERNATIONAL CONFERENCE	Nuri Kim , Obin Kwon, Hwiyeon Yoo, Yunho Choi, Jeongho Park, and Songhwai Oh, “ Topological Semantic Graph Memory for Image-Goal Navigation ,” in <i>Proc of the Conference on Robot Learning</i> (CoRL), Dec. 2022. (Oral Presentation, Acceptance Rate: 6.5%)	

Obin Kwon, **Nuri Kim**, Yunho Choi, Hwiyeon Yoo, Jeongho Park, and Songhwai Oh, “Visual Graph Memory with Unsupervised Representation for Visual Navigation,” in *Proc. of the International Conference on Computer Vision (ICCV)*, Oct. 2021.

Nuri Kim, Minjae Kang, and Songhwai Oh, “Semantic Descriptors into Representation for Robust Indoor Visual Place Recognition,” in *Proc. of the International Conference on Control, Automation and Systems (ICCAS)*, Oct. 2021.

Nuri Kim, Yunho Choi, Minjae Kang, Songhwai Oh, “GOPE: Geometry-Aware Optimal Viewpoint Path Estimation Using a Monocular Camera,” in *Proc. of the International Conference on Control, Automation and Systems (ICCAS)*, Oct. 2020.

Hwiyeon Yoo, **Nuri Kim**, Jeongho Park, Songhwai Oh, “Path-Following Navigation Network Using Sparse Visual Memory,” in *Proc. of the International Conference on Control, Automation and Systems (ICCAS)*, Oct. 2020.

Yunho Choi, **Nuri Kim**, Jeongho Park, Songhwai Oh, “Viewpoint Estimation for Visual Target Navigation by Leveraging Keypoint Detection,” in *Proc. of the International Conference on Control, Automation and Systems (ICCAS)*, Oct. 2020.

Hyemin Ahn, Sungjoon Choi, **Nuri Kim**, Geonho Cha, and Songhwai Oh, “Interactive Text2Pickup Networks for Natural Language based Human-Robot Collaboration,” in *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, Oct. 2018.

AWARDS AND HONORS

Awards and Scholarships

- Brain Korea 21 Plus Scholarship 2021, 2020, 2019
- Great Paper Award, Korean Institute of Information Scientists and Engineers 2017
- Lecture & Research Scholarship 2016
- Graduate with Great Honor, Korea University 2016
- National Scholarship For Science and Engineering 2014-2015
Funded by Korea Student Aid Foundation (KOSAF)
- Creative Challenger Scholarship, Korea University 2015

TEACHING EXPERIENCES

Invited Talk

- Semantic Visual Navigation for Embodied Agents: A Graph-Based Approach, KAIST Feb 2023
- Intelligent Robotics Course, Korea University June 2022

Courses

- Electronic Circuits Lab Spring 2025

Teaching Assistant

- Graduation Project, Seoul National University Fall 2018
- Introduction to Intelligent Systems, Seoul National University Fall 2016

RESEARCH PROJECT EXPERIENCES

[**Navi AI**] Development of AI Technology for Guidance of a Mobile Robot to its Goal with Uncertain Maps in Indoor/Outdoor Environments 2019-2023

- Developed an indoor environment navigation robot that works even in unknown environments by leveraging semantic understanding when maps are unavailable.

[**SW Star Lab**] Robot Learning: Efficient, Safe, and Socially-Acceptable Machine Learning 2019-2023

- Developed a robot navigation technology capable of predicting crowd trajectories and performing social actions in various crowd cluster scenarios.

[**Brain AI**] Brain-Inspired AI with Human-Like Intelligence 2019-2023

- Developed a reliable object detector in occluded environments
- [**Giga 4D**] Real-time 4D reconstruction of dynamic objects for ultra-realistic service 2017-2020
- Collected 3D point cloud data for dynamic object registration and alignment.

SERVICE

Associate Editor

- Ubiquitous Robots (UR), 2025

Conference and Journal Reviewing

- IEEE International Conference on Robotics and Automation (ICRA) 2024
- International Conference on Intelligent Robots and Systems (IROS) 2024
- IEEE Robotics and Automation Letters (RA-L) 2022
- IEEE Transactions on Robotics (T-RO) 2020, 2023
- International Conference on Ubiquitous Robots (UR) 2022

PROGRAMMING SKILLS

Programming language: Python, C/C++, Matlab, HTML/CSS, Javascript, Google app scripts

Software: PyTorch, Habitat, OpenCV, TensorFlow, LaTeX