

SEUNGCHAN KIM
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<https://seungchan-kim.github.io>

Education	Carnegie Mellon University Ph.D. student at Robotics Institute <i>Advisor: Sebastian Scherer</i>	Pittsburgh, Pennsylvania Sep 2020 - Present
	Brown University M.S. in Computer Science B.S. in Applied Mathematics & Computer Science <i>Advisor: George Konidaris</i>	Providence, Rhode Island Sep 2019 - May 2020 Sep 2013 - May 2019
Research Experience	CMU Air Lab • Conducting AI research with a focus on robot learning and perception	Oct 2020 - Present
	Brown University Intelligent Robot Lab • Researched on deep reinforcement learning, model-based reinforcement learning	Sep 2017 - May 2020
	Brown University Serre Lab • Developed algorithm to analyze visual attention in childhood development	Jan 2018 - May 2019
Publications	[7] AirDet: Few-Shot Detection without Fine-tuning for Autonomous Exploration Bowen Li, Chen Wang, Pranay Reddy, Seungchan Kim , Sebastian Scherer. <i>European Conference on Computer Vision (ECCV) 2022.</i>	
	[6] Robotic Interestingness via Human-Informed Few-Shot Object Detection Seungchan Kim , Chen Wang, Bowen Li, Sebastian Scherer. <i>IEEE/RSJ International Conference on Robotics and Systems (IROS) 2022.</i>	
	[5] Unsupervised Online Learning for Robotic Interestingness with Visual Memory Chen Wang, Yuheng Qiu, Wenshan Wang, Yafei Hu, Seungchan Kim , Sebastian Scherer. <i>IEEE Transactions on Robotics (T-RO) 2021.</i>	
	[4] Using Computational Analysis of Behavior to Discover Developmental Change in Memory-Guided Attention Mechanisms in Childhood Dima Amso, Lakshmi Govindarajan, Pankaj Gupta, Heidi Baumgartner, Andrew Lynn, Kelley Gunther, Diego Placido, Tarun Sharma, Vijay Veerabadran, Kalpit Thakkar, Seungchan Kim , Thomas Serre. <i>PsyArXiv. doi:10.31234/osf.io/gq4rt.</i>	
	[3] Combating the Compounding-Error Problem with a Multi-step Model Kavosh Asadi, Dipendra Misra, Seungchan Kim , Michael Littman. <i>arXiv preprint. CoRR abs/1905.13320 [cs.LG]</i>	
	[2] DeepMellow: Removing the Need for a Target Network in Deep Q-Learning Seungchan Kim , Kavosh Asadi, Michael Littman, George Konidaris. <i>International Joint Conference on Artificial Intelligence (IJCAI) 2019.</i> <i>Multidisciplinary Conference on Reinforcement Learning and Decision Making (RLDM) 2019.</i>	
Invited Talks	[1] Removing the Target Network from Deep Q-Networks with the Mellowmax Operator Seungchan Kim , Kavosh Asadi, Michael Littman, George Konidaris. <i>International Conference on Autonomous Agents and Multiagent Systems (AAMAS) 2019.</i>	
	DeepMellow: Removing the Need for a Target Network in Deep Q-Learning Brown University Robotics Lab, Providence, RI.	Oct 2019

An Alternative Softmax Operator for Deep Reinforcement Learning
Machine Intelligence Community (MIC) Conference, Boston, MA.

Sep 2019

Teaching

16-833 Robot Localization and Mapping, CMU Robotics, TA
CSCI1430 Computer Vision, Brown CS, TA
CSCI0040 Scientific Computing and Problem Solving, Brown CS, TA
ENGN0040 Dynamics and Vibrations, Brown Engineering, TA

Jan 2022 - May 2022
Jan 2019 - May 2019
Jan 2015 - May 2015
Jan 2015 - May 2015

Academic Activities

Reviewer

- IEEE Robotics and Automation Letters
- ICML 2020, AAAI 2021, ICLR 2021, NeurIPS 2021, 2022

Mentor

- CMU AI Mentorship Program 2021, 2022
- CMU SCS Graduate Application Support Program 2020

**Graduate
Coursework**

16-811 Math Fundamentals for Robotics
16-720B Computer Vision
10-715 Advanced Introduction to Machine Learning
16-711 Kinematics, Dynamics, and Control
16-833 Robot Localization and Mapping
16-824 Visual Learning and Recognition