Hyounghun Kim

Website: hyounghk.github.io
Email: h.kim at postech.ac.kr
khh3323 at gmail.com

Professional Experience

POSTECH GSAI/CSE   Pohang, South Korea
Assistant Professor   Feb 2025 – Present

UNIST AIGS/CSE   Ulsan, South Korea
Assistant Professor   Aug 2022 – Jan 2025

Alexa AI at Amazon   Sunnyvale, CA
Applied Scientist Intern   May 2021 – Dec 2021
Mentor: Aishwarya Padmakumar, Di Jin, Dilek Hakkani-Tur

Adobe Research   San Jose, CA
Research Intern   May 2020 – Nov 2020
Mentor: Doo Soon Kim, Trung Bui

Samsung Electronics   Suwon, South Korea
Mobile Communications Business   Feb 2009 – May 2015
Software Engineer

Education

University of North Carolina at Chapel Hill   Chapel Hill, NC
Ph.D. in Computer Science, Advisor: Prof. Mohit Bansal   Aug 2017 – May 2022

University of Southern California   Los Angeles, CA
M.S. in Computer Science   Aug 2015 – May 2017

Yonsei University   Seoul, South Korea
B.S. in Electrical & Electronics Engineering   Mar 2002 – Feb 2009

Research Interests

Natural Language Processing (NLP), Multimodal Learning (NLP + Computer Vision/Robotics/AR)
Language Grounding, Dialogue, Multimodal Virtual AI Assistant, Machine Learning, Deep Learning

Publications

18. **Enabling Chatbots with Eyes and Ears: An Immersive Multimodal Conversation System for Dynamic Interactions**
Jihyoung Jang*, Minwook Bae*, Minji Kim, Dilek Hakkani-Tur, and Hyounghun Kim. Proceedings of ACL 2025.

17. **Collective Critics for Creative Story Generation**
Minwook Bae, and Hyounghun Kim. Proceedings of EMNLP 2024. [pdf]

16. **Mixed-Session Conversation with Egocentric Memory**
Jihyoung Jang, Taeyoung Kim, and Hyounghun Kim. Findings of EMNLP 2024. [pdf]

15. **Conversation Chronicles: Towards Diverse Temporal and Relational Dynamics in Multi-Session Conversations**
Jihyoung Jang, MinSeong Boo, and Hyounghun Kim. Proceedings of EMNLP 2023. [pdf]

14. **Sound of Story: Multi-modal Storytelling with Audio**
Jaeyeon Bae*, Seokhoon Jeong*, Seokun Kang, Namgi Han, Jae-Yon Lee, Hyounghun Kim, and Taehwan Kim. Findings of EMNLP 2023. [pdf]

13. **CoSIm: Commonsense Reasoning for Counterfactual Scene Imagination**
Hyounghun Kim*, Abhay Zala*, and Mohit Bansal. Proceedings of NAACL 2022. [pdf]

12. **RESIN-11: Schema-guided Event Prediction for 11 Newsworthy Scenarios**
Xinya Du, Zixuan Zhang, Sha Li, Pengfei Yu, Hongwei Wang, Tuan Lai, Xudong Lin, Ziqi Wang, Iris Liu, Ben Zhou, Haoyang Wen, Manling Li, Darryl Hannan, Jie Lei, Hyounghun Kim, Rotem Dror, Haoyu Wang, Michael Regan, Qi Zeng, Qing Lyu, Charles Yu, Carl Edwards, Xiaomeng Jin, Yizhu Jiao, Ghazaleh Kazeminejad, Zhenhailong Wang, Chris Callison-Burch, Mohit Bansal, Carl Vondrick, Jiawei Han, Dan Roth, Shih-Fu Chang, Martha Palmer, and Heng Ji. Proceedings of NAACL 2022 (demo). [pdf]

11. **On the Limits of Evaluating Embodied Agent Model Generalization Using Validation Sets**
Hyounghun Kim, Aishwarya Padmakumar, Di Jin, Mohit Bansal, and Dilek Hakkani-Tur. Insights Workshop at ACL 2022. [pdf]

10. **CAISE: Conversational Agent for Image Search and Editing**
Hyounghun Kim, Doo Soon Kim, Seunghyun Yoon, Franck Dernoncourt, Trung Bui, and Mohit Bansal. Proceedings of AAAI 2022. [pdf]

9. **NDH-Full: Learning and Evaluating Navigational Agents on Full-Length Dialogue**
Hyounghun Kim, Jialu Li, and Mohit Bansal. Proceedings of EMNLP 2021. [pdf]

8. **Continuous Language Generative Flow**
Zineng Tang, Shiyue Zhang, Hyounghun Kim, and Mohit Bansal. Proceedings of ACL 2021. [pdf]

7. **FixMyPose: Pose Correctional Captioning and Retrieval**
Hyounghun Kim*, Abhay Zala*, Graham Burri, and Mohit Bansal. Proceedings of AAAI 2021. [pdf]

6. **ArraMon: A Joint Navigation-Assembly Instruction Interpretation Task in Dynamic Environments**
Hyounghun Kim, Abhay Zala, Graham Burri, Hao Tan, and Mohit Bansal. Findings of EMNLP 2020. [pdf]

5. **Dense-Caption Matching and Frame-Selection Gating for Temporal Localization in VideoQA**
Hyounghun Kim, Zineng Tang, and Mohit Bansal. Proceedings of ACL 2020. [pdf]

4. **Modality-Balanced Models for Visual Dialogue**
Hyounghun Kim, Hao Tan, and Mohit Bansal. Proceedings of AAAI 2020. [pdf]

3. **Improving Visual Question Answering by Referring to Generated Paragraph Captions**
Hyounghun Kim, and Mohit Bansal. Proceedings of ACL 2019 (short paper). [pdf]
*Best short paper nomination

2. **Development of Augmented Reality Applications in Otolaryngology-Head and Neck Surgery**
Austin S. Rose, Hyounghun Kim, Henry Fuchs, and Jan-Michael Frahm. The Laryngoscope, Jul 2019. [pdf]

1. **Towards Fully Mobile 3D Face, Body, and Environment Capture Using Only Head-worn Camera**

Young-Woon Cha, True Price, Zhen Wei, Xinran Lu, Nicholas Rewkowski, Rohan Chabra, Zihe Qin, Hyounghun Kim, Zhaoqi Su, Yebin Liu, Adrian Ilie, Andrei State, Zhenlin Xu, Jan-Michael Frahm, and Henry Fuchs. IEEE TVCG Vol. 24, Nov. 2018. [pdf]

Invited Talks

Dec 2024: POSTECH AI DAY 2024
Nov 2024: School of Electrical and Electronic Engineering, Yonsei University
Aug 2024: Korean Artificial Intelligence Association Summer Conference 2024 (Tutorial)
Aug 2024: KoSAIM 2024 Summer School (Tutorial)
May 2024: KSIAM 2024 Spring Conference
Apr 2024: Language Intelligence Research Section, ETRI
Dec 2023: Kosin University College of Medicine
Oct 2023: 2023 the 75th Korean Dermatological Association Autumn Meeting
Apr 2023: Korea Occupational Safety and Health Agency

Services

Senior Action Editor: ACL Rolling Review (ARR)
Area Chair/Action Editor: ACL Rolling Review (ARR), NAACL
Reviewer: ACL Rolling Review (ARR), ACL, EMNLP, EACL, NeurIPS, ICLR, CVPR, AAAI, Computational Linguistic (Standing Reviewer), TPAMI
Program Committee: SpLU-RoboNLP 2021