Hyounghun Kim

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Professional Experience

UNIST AIGS — Ulsan, South Korea
Assistant Professor — Aug 2022 – Present

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

SK Telecom — Seoul/Daejeon, South Korea
SK Group Internship Program — July 2008 – Aug 2008

Samsung Electronics — Suwon, South Korea
Internship — Jan 2008

Education

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

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 — March 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

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

Research Experience

MURGe-Lab (in UNC NLP Group) UNC at Chapel Hill
Research Assistant, Advisor: Prof. Mohit Bansal Aug 2018 – Present

− NLP + {Computer Vision, Robotics, AR}

Telepresence Lab UNC at Chapel Hill
Research Assistant, Advisor: Prof. Henry Fuchs Aug 2017 – July 2018

− Augmented Reality in Otolaryngology-Head and Neck Surgery
  Collaborated with Dr. Austin Rose (UNC Otolaryngology)
− Ego-Centric Environment Reconstruction (3D Printing, LED Mounts)

Mentoring & Teaching

Mentoring: Abhay Zala (UNC Undergraduate), Zineng Tang (UNC Undergraduate)
Guest Speaker: COMP 786 Natural Language Processing, UNC, Fall 2020 (VQA, VL Navigation)

Services

Reviewer: ACL Rolling Review (ARR), ACL, EMNLP, EACL, AAAI, TPAMI
Program Committee: SpLU-RoboNLP 2021