Hyunjin Kim

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Research Interests

3D Scene Reconstruction, 3D Scene Understanding, 3D Computer Vision, Robotics

Education

University of California San Diego   La Jolla, CA, USA
M.S. in Computer Science and Engineering   Sep. 2024 - June 2026 (expected)

Yonsei University   Seoul, Republic of Korea
B.S. in Urban Planning and Engineering, Computer Science and Engineering   Mar. 2020 - Aug. 2024

- GPA: 4.09/4.3 (98.4%)
- Rank: 2/73

University of Toronto   Toronto, Canada
Exchange Student, Trinity College, Computer Science   Sep. 2022 - Apr. 2023

- GPA: 3.90/4.0

Research Experience

Visual & Geometric Intelligence (VGI) Lab, Seoul National University   Seoul, Republic of Korea
Research Intern (Advisor : Prof. Jaesik Park)   Dec. 2023 - Present

- Leading project on developing a **Generalized Codebook for 3D Scene Reconstruction**, focusing on 3D Gaussian Splatting and Neural Radiance Fields

KAIST Visual AI Group, KAIST School of Computing   Daejeon, Republic of Korea
Research Intern (Advisor : Prof. Minhyuk Sung)   June 2023 - Aug. 2023

- Ideated and led project on **Diffusion-Based Image Editing with Text and Mask Guidance for NeRF editing**
- Proposed and developed a method integrating a Segmentation and Diffusion Inpainting model for precise editing
- Implemented PointNet, NeRF, Diffusion models for preparation on research on 3D Machine Learning. 🎧

Robot Vision and Learning (RVL) Lab, University of Toronto   Toronto, Canada
Research Student (Advisors : Prof. Florian Shkurti, Prof. Animesh Garg)   Jan. 2023 - May 2023

- Participated in a project on interactive robot learning environments, specifically **Chemistry Robotics Lab Simulation**
- Developed the initial chemistry robotic lab simulation environment with the custom 8-DOF robot arm and worked on simulating the pick and place, pouring task

Medical Imaging and Computer Vision (MICV) Lab, Yonsei University   Seoul, Republic of Korea
Research Intern (Advisor : Prof. Seong Jae Hwang)   May 2022 - Aug. 2022

- Participated in research on **Transformers in Medical Imaging**, specifically on the task of Scan Time Reduction

Industry Experience

Linq   Cambridge, MA, USA (remote)
Research Intern (Advisor : Prof. Jy-yong Sohn)   Sep. 2023 - Feb. 2024

- Co-led the **Strategic Reduction of LLMs' Semantic Errors in Chain-of-Thought** project
- Proposed and developed a novel method for the effective reduction of semantic errors in Chain-of-Thought prompting for Large Language Models (LLMs).

RebuilderAI   Seongnam, Republic of Korea
Industry Collaboration External Researcher   July 2023 - Sep. 2023

- Participated in the **2D Image and 3D Model Embedding Search** R&D project
- Developed a custom 3D model embedding network based on Point Clouds for Contrastive Learning

Alchera Inc.   Seongnam, Republic of Korea
Industry Collaboration External Researcher   July 2022 - Sep. 2022

- Participated in the **Blur Face Detection** R&D project
- Developed a Clean-Blur Face Image Dataset based on the FFHQ dataset and an algorithm for iterative adversarial blur attack

PUBLICATIONS

1. **Can Separators Improve Chain-of-Thought Prompting?**
   Yoonjeong Park*, **Hyunjin Kim***, Chanyeol Choi, Junseong Kim, Jy-yong Sohn
   (* Equal Contributions)
   Under Review

HONORS AND SCHOLARSHIPS

2024	**Honors**, Yonsei University Top 10% in the College of Engineering
2023	**Excellence Award**, Yonsei University Urban Engineering Capstone Design Graduation Exhibition
2023	Inclusion@RSS Fellowship, Robotics: Science and Systems (RSS) 2023 Selected as one of the 17 fellows from 165 applicants (10.3% acceptance rate)
2022	**High Honors**, Yonsei University Top 3% in the College of Engineering
2021 - 2022	**Jilli Scholarship (Merit-based Scholarship)**, Yonsei University Awarded approximately $4,000
2021	**Honors**, Yonsei University Top 10% in the College of Engineering

TECHNICAL SKILLS

Programming Languages:	Python, Java, C++, HTML/CSS, SQL/PostgreSQL, R, MIPS Assembly
Tools:	Deep Learning Frameworks (PyTorch, Tensorflow), Python Scientific Computing Libraries (numpy, matplotlib etc.), Open3D, NVIDIA Isaac Sim, Docker, SLURM, LaTeX
Operating Systems:	Windows, Mac OS X, Linux(Ubuntu)

LANGUAGES

English (Native), **Korean** (Native)

REFERENCES

Available Upon Request