Jiho Park

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Education

Yonsei University Seoul, Korea
B.S. of Electrical and Electronics Engineering *Mar 2019 – Present*
(1.5 years of absence due to military service) *GPA: 4.10/4.30*

The University of Texas at Austin Texas, USA
Exchange Student in Electrical and Computer Engineering *Fall 2024(expected)*

Research Interest

Previously, my intrigue was centered on the research field exploring the understanding of the 4D (dynamic 3D) world. Now, I'm deeply interested in how we can use this perception to make informed decisions and take meaningful actions. Consequently, I am refining my research area within Robot Learning, aiming to integrate perception with actionable insights.

Research Experience

MLCS(Machine Learning and Control Systems) Lab, Yonsei University Apr 2024 - Present
Undergraduate Intern

- *Conducting research on the topic of Coarse-to-fine Behavior Cloning with Action Sequence Quantization*
- Developed a ROS-based system for robotic manipulation, incorporating the Kinova-Jaco arm, three RGBD cameras, and an AI model

MIR(Multimodal AI) Lab, Yonsei University Aug 2023 - Jan 2024
Undergraduate Intern

- Studied extensively in the field of 3D Vision, covering 3D Representations, Static & Dynamic 3D Scene Reconstruction
- Developed a large-scale 3D Talking Head Dataset for speech-driven face generation

Work Experience

RebuilderAI Jul 2023 - Sep 2023
Part-time Research Assistant

- Background image generation for commercial product; built dataset and fine-tuned diffusion model
- Saliency-aware product segmentation

Uaround May 2022 - Jun 2022
Part-time Intern

- Face similarity modeling for virtual human

Projects

Coarse-to-fine Behavior Transformer with Action Sequence Quantization Apr. 2024 - Aug. 2024

- By leveraging the representation power of coarse-to-fine vector quantization, we are expecting our model to achieve strong imitation learning performance and superior inference speed compared to diffusion policy.

4D Avatars with Deformable Gaussian Splatting *(github)* Oct 2023 - Nov 2023

- Applied deformable 3D Gaussian Splatting methods along with facial expression prior for better facial reconstruction and controllability
- Awarded 1st place in 3rd YAICON(Yonsei AI Club Conference)

OOD Detection Research Project *(report)* Jun 2023

- Exploring the properties of Generative Model for OOD Detection, with Hierarchical Self-Conditioned AutoEncoder
- Achieved 1st place in the DeepLearningLab(EEE4423) course; invited by the TA to co-author a paper

Camera Pose Estimation for Tensor Radiance Fields *(report)* Sep 2023 - Nov 2023

Diffusion Model Web Application Project *(github)* Apr 2023 - May 2023

- Sketch & Prompt to Image using ControlNet; fine-tuned the model and applied to the web
- Awarded 1st place in 2nd YAICON

Virtual Hand Drawing Simulator *(github)* Nov 2022 - Dec 2022

Extracurricular

Yonsei AI (YAI) Jan 2023 - Present

Academic Team Leader(Jan 2024 - Present)

- An AI study club that facilitates the collective pursuit of knowledge among students, fostering collaboration and project development centered on deep learning research.
- Presentation Materials: *3D Gaussian Splatting*, *Diffusion Model*, *SE(3)-DiffusionFields*, *NeRF for Robotics*

Electrical & Electronics Honor Society, Yonsei Jul 2022 - Jun 2023

Data Science Lab, Yonsei Jan 2022 - Dec 2022

Scholarships

Korea-U.S. Advanced Technology Youth Exchange Scholarship Fall 2024

by Korea Institute for Advancement of Technology(KIAT)

- approx. 9,000 USD for single semester in University of Texas at Austin

Yonsei Veritas(High-academic Performers) Scholarship

- Honors: Spring 2022, Fall 2022
- High Honors: Spring 2023, Fall 2023

Hanseong Son Jae Han Nobel Scholarship 2017 - 2018

- approx. 9,000 USD

Military Service

Republic of Korea Army Sergeant, Honorably Discharged Sep 2020 - Mar 2022

Heavy Vehicle and Commander Driver

Skills

Languages: Python, C/C++, C#(Unity), Verilog

Languages: Korean (Native), English (Proficient, TOEFL: 105)