Jiho Park

qkrwlgh0314@yonsei.ac.kr | GitHub

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

I am interested in how we can enable agents to obtain actionable insights from observations within a dynamic 3D world. Therefore, I have a broad research interest in the fields of energy-based/flow-matching models for planning/reasoning, egocentric multi-sensory learning, model-based RL, robot learning and 3D representation, among others.

Research Experience

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

- Led 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 Segmentation for commercial product image

Uaround May 2022 - Jun 2022
Part-time Intern

- Face similarity modeling for virtual human

Projects

Coarse-to-fine Behavior Transformer with Action Sequence Quantization May. 2024 - Jul. 2024

- By leveraging the representation power of coarse-to-fine vector quantization, we enabled fast inference and robust performance for behavior cloning.

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)