Junhyun (Jun) Kim

junhyun.kim@gatech.edu | jun-hyun-kim.github.io

Introduction

My current research focuses on robot manipulation and vision-language-action models, particularly learning generalizable robot policies from human demonstrations. Previous experience includes 3D perception, surgical robotics, and medical image restoration.

Education

- **Georgia Institute of Technology** *August 2025 - Present*
  M.S. in Robotics
  - Advisor: Prof. Zsolt Kira
  - GPA: 4.00/4.00

- **Seoul National University** *March 2019 - August 2025*
  B.S. in Electrical and Computer Engineering
  - Summa Cum Laude, GPA: 3.99/4.30

Skills

Programming Languages	Python, C++, Bash
Machine Learning	PyTorch, Hugging Face Transformers, Accelerate
Robotics, Simulation & Platforms	ROS 2, MuJoCo, LeRobot, Open3D, Franka Panda
Infrastructure & Tools	SLURM, Docker, MATLAB

Publications

[1] **SeeTraceAct: Visibility-Aware Latent Planning from Cross-Embodiment Demonstration Videos**.
Jaehyeon Son, **Junhyun Kim**, Kyle Kam, Jeremiah Coholich, Seok Joon Kim, Jinhoo Kim, Chris Dongjoo Kim, Jaemin Cho, Dieter Fox, and Zsolt Kira.
arXiv preprint, under review, 2026.

Work Experience

- **Computer Vision Intern** *January 2025 - June 2025*
  Sequor Robotics
  - Developed and optimized a prelabeling pipeline using **3D point cloud** panoptic segmentation models and classical machine learning techniques, reducing manual labeling time by 75%.
  - Developed manual 3D labeling software for human annotators based on Open3D library

Research Experience

- **Graduate Researcher** *December 2025 - Present*
  Robotics Perception and Learning Lab in Gerogia Tech
  - Co-designed and stabilized a demo-conditioned **Vision-Language-Action (VLA) model** by diagnosing and resolving critical implementation and evaluation issues.
  - Adapted an existing demo-conditioned policy into a VLA baseline for controlled comparison with the proposed method.
  - Explored cross-embodiment retargeting as a means of expanding RoboCasa training data, implementing a prototype pipeline with task-dependent success rates of 20–80%.

- **Undergraduate Research Assistant** *May 2024 - July 2024*
  Advanced Robotic Technologies for Surgery Laboratory(ARTS Lab) in UT Austin
  - Improved the accuracy of single optic fiber shape sensing, which can be used for navigating body cavities.
    - Resolved two hardware issues and reduced tip positioning error from 10~20 mm to under 7 mm.

- **Undergraduate Research Assistant** *June 2023 - August 2023*
  Laboratory for Imaging Science and Technology(LIST) in Seoul National University
  - Utilized a score-based diffusion model to denoise MRI images of the substantia nigra(SN) region in human brain.

Projects

- **LLM Compression : Enhancing AWQ** *Fall 2024*
  B.S. Thesis
  - Improved AWQ(Activation-aware Weight Quantization) with extra scaling.
    - Obtained lower perplexity(PPL) for INT3-quantized OPT and Llama 2.