Wontaek Kim

dnjsxor999@gmail.com | (217) 778-8061 | github.com/dnjsxor999 | linkedin.com/in/wontaek-kim

Education

Georgia Institute of Technology *Expected: Aug 2024 - May 2026*
M.S. in Computer Science / Robotics / Advisor: Prof. Sehoon Ha ***GPA: 4.00/4.00***
Georgia Institute of Technology *May 2021 - May 2024*
B.S. in Computer Science / Artificial Intelligence ***GPA: 3.87/4.00***

Publications

- Jeonghwan Kim*, **Wontaek Kim***, Yidan Lu, Jin Cheng, Fatemeh Zargarbashi, Zicheng Zeng, Zekun Qi, Zhiyang Dou, Nitish Sontakke, Donghoon Baek, Sehoon Ha, Tianyu Li. *Switch-JustDance: Benchmarking Whole-Body Motion Tracking Policies Using a Commercial Console Game*. Pre-print. [Website]
- **Wontaek Kim**, Tianyu Li*, Sehoon Ha*. *MoReFlow: Motion Retargeting Learning through Unsupervised Flow Matching*. Pre-print. [Website]
- Tianyu Li, Jeonghwan Kim, **Wontaek Kim**, Donghoon Baek, Seungeun Rho, Sehoon Ha. *Switch4EAI: Leveraging Console Game Platform for Benchmarking Robotic Athletics*. CoRL Open-Source Hardware in the Era of Robot Learning Workshop, 2025. [Website]

Experience

Student Researcher | **Ha Lab** at Georgia Tech, Atlatna, GA *May 2024 - Present*

- Research cross-embodiment generalization and on teaching agents to acquire whole-body dynamic manipulation skills from human demonstrations.
- Build an end-to-end pipeline that captures Nintendo *Switch-JustDance* gameplay, reconstructs 3D human motion via monocular MoCap, retargets it to robots, and conduct Hardware experiments on G1 humanoid to evaluate performance using in-game scoring.
- Develop *MoReFlow*, an unsupervised flow-matching framework that aligns tokenized motion embeddings across embodiments, enabling flexible, reversible motion retargeting without paired data while improving controllability and realism over prior methods.

Graduate Teaching Assistant | Georgia Tech, Atlatna, GA *Aug 2024 - Dec 2025*

- CS 8803 – Deep Reinforcement Learning: Contributed to the design and review of programming assignments and projects; mentored students on research-oriented course projects, providing technical feedback on algorithms, implementation, and experimental analysis.
- CS 4496/7496 – Computer Animation (Head TA): Led course operations for 200 students, managing the TA team and handling student logistics and questions; guided students through hands-on motion capture sessions and projects on physics-based character animation.

Software Engineer Intern | Samsung Electronics (Head Quarter), Suwon, South Korea *June 2023 - Aug 2023*

- Tested and simulated camera ISP (Image Signal Processing) pipeline code for Galaxy Z Flip/Fold 5 within Qualcomm chipset
- Created an ISP simulator using algorithms originally designed for Galaxy device models. Incorporated features such as BPC (Bad Pixel Correction), demosaic, and gamma correction
- Visualize the procedure of Galaxy ISP pipeline by converting RAW images into sequentially dumped JPG images
- Automated the adjustment of camera parameters for changing user-settings according to surrounding environment which resulted in enhanced user experience via 23% faster load times

Research Engineer | **TECHtonics Lab** at Georgia Tech, Atlatna, GA *Aug 2022 - May 2023*

- Constructed algorithms for automatic counting of patterns (etched fissions) in minerals from microscope 3D images by using Deep Neural Networks (DNN), and integrated in ImageJ plugin to run promptly
- Trained two deep neural networks with object detection (YOLOv3) and algorithms (Darknet-53) with real datasets from the lab and connected the algorithms into offline application “AI-Track-tive” by using OpenCV

Skills

Languages: Korean: Native, English: Fluent (TOEFL 100)
Coding: Advanced: Python, PyTorch | Basic: C/C++, ROS2, Java, Query, Dart, Assembly, JavaScript, TypeScript
Software & Tools : Linux, tmux, Git, React, Next.js, Docker, AWS, MySQL, MongoDB