Jinha Choi

Email: jinhac174@gmail.com
Webpage: jinhac174.github.io

Research Interests

I previously worked on robot learning, with a focus on humanoid natural loco-manipulation. I am particularly interested in general humanoid whole-body motion that can be applied to many real-world tasks. I aim to tackle the scalability problems and the burden of reward engineering in reinforcement learning environments that are needed per task in many settings. I looked into modularizing body-part-wise functions and composing them into natural motion that is more easily applicable to downstream tasks. My current interest lies in reinforcement algorithms with mathematical foundations.

Education

Yonsei University, Underwood International College *Mar 2021 – Present*

B.S. Candidate in Nano Science and Engineering (NSE)
Double Major in Computer Science

GPA: 3.93 / 4.3

West Vancouver Secondary School, Canada *Sep 2014 – Jun 2020*

International Baccalaureate Diploma

Publications

When AI Co-Scientists Fail: SPOT—a Benchmark for Automated Verification of Scientific Research

Guijin Son, Jiwoo Hong, Honglu Fan, Heejeong Nam, Hyunwoo Ko, Seungwon Lim, Jinyeop Song, **Jinha Choi**, Gonçalo Paulo, Youngjae Yu, Stella Biderman

Contributing co-author, arXiv

Experience

Yonsei DILLAB Intern *Jan 2026 - Current*
Advised by Prof. Jongmin Lee

Working on reinforcement learning algorithms with strong mathematical foundations and proofs.

Yonsei RLLAB Intern *Jul 2025 - Dec 2025*
Advised by Prof. Youngwoon Lee

Explored collision-free reinforcement learning methods and narrowed focus to general humanoid loco-manipulation. Investigated limb-wise modular control for humanoids by modularizing body-part motions as reusable limb functions, aiming to improve scalability across downstream tasks without relying on environment-specific controller or reward design.

Yonsei MIRLAB Intern *Sep 2024 - Dec 2024*
Advised by Prof. Youngjae Yu

Trained in lab workflows and research practices for robot learning. Studied multi-modal learning

and built familiarity with the Isaac Sim simulation for RL environments. Contributed to an LLM benchmarking study by processing and labeling datasets and organizing classification schemes for experiments evaluating LLMs' ability to assess scientific papers.

OUTTA AI Bootcamp – Deep Learning Advanced *Jul 2024 - Aug 2024*
Summer bootcamp offered by Outta

Completed a two-month advanced deep learning bootcamp covering core architectures and generative models. In a five-member team, built an LLM-conditioned diffusion pipeline that converts text clothing descriptions into conditioning signals to generate virtual try-on images with consistent outfit changes.

Korea Defense Intelligence Command - Translator *Mar 2023 - Sep 2024*
Military Service

Completed military service as a translator/interpreter supporting intelligence operations. Translated and interpreted classified documents and meetings for KDIC and partner agencies, including the National Intelligence Service (NIS), U.S.-based counterparts National Geospatial-Intelligence Agency (NGA), and several counterparts of other allies.

Vex Robotics Competitions *Sep 2017 - Jun 2020*
Team lead of 1010B at WVSS Robotics Academy

Competed in VEX Robotics Competition seasons *Starstruck*, *In the Zone*, and *Turning Point*. Led Team 1010B (6–12 members) through the full robot-development cycle: game strategy analysis, mechanical/electrical design and build (wiring, assembly), programming motor/sensor control and autonomous control periods, and competitive driving. Coordinated with alliance teams during the world championship.

Web and Game Development Projects *Sep 2017 - Mar 2018*
Program, projects offered in a form of class

Developed an interactive game prototype in Unity as an individual project. Built personal websites featuring user-interactive functionality and custom UI/design.

Awards and Honors

Peer Mentor, Yonsei–Nexon RC Creative Platform *2024*

Selected as a peer mentor based on prior competition performance (*former 1st-place team*). Provided guidance to participating teams and received an official mentoring certificate.

Honor Roll, Yonsei University *2022*

1st Place, Yonsei–Nexon RC Creative Platform *2021*

Won *1st place* in a university-wide social-impact startup ideation competition co-hosted with Nexon. Led a 5-member team to design an automated revolving-door assistance system to improve safe building access for people with mobility impairments. Developed a 3D-printed prototype and presented the design rationale (safety, practicality, community impact) to judges and organizers; ranked *1st of 90 teams* and awarded *$10K*.

Finalist, VEX Robotics World Championship — Kentucky, USA *2019*

Competed at the VEX Robotics World Championship (approximately 600 qualifying teams). Ranked

as a *Science Division finalist* (top finish within a 100-team division), advancing to the division final and narrowly missing qualification to the round-robin finals against the top teams from other divisions.

1st Place, VEX Robotics Canada BC Provincial Championship *2019*

Led Team 1010B to qualify for Provincials via a regional championship, then won *1st place in British Columbia Provincials*, earning qualification to the VEX Robotics World Championship.

Skills

Programming	Python, C, Java, HTML/CSS *Primarily Python for research code, scripting, and clean project structure.*
ML / DL	Deep Learning, Reinforcement Learning *Experience reading and implementing RL papers; focus on humanoid loco-manipulation.*
Frameworks / Libraries	PyTorch, NumPy *Training loops, dataset preprocessing, and evaluation/benchmark scripts.*
Simulation / Robotics	Isaac Sim, Isaac Lab *Simulation-based robot learning workflows and environment setup for RL.*
Tools	Linux, Git, Docker *Remote development, version control, and reproducible environments.*
Languages	Korean (native), English (proficient), Spanish (basic) *Comfortable writing technical documents and giving presentations in English and Korean.*