Hyunseo **Yang**

Undergraduate Student, Seoul National University, College of Liberal Studies

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Research Interests

- Artificial Intelligence (AI), Large Language Models (LLMs), Human-Computer Interaction (HCI)

Education

Seoul National University — *Seoul, S.Korea*

B.S. Candidate in Computer Science and Engineering & Business Administration — *Mar. 2021 - Present*

- GPA: 3.87/4.00

Experience

Algorithmic Intelligence Laboratory, KAIST — *Seoul, S.Korea*

Research Intern, Advisor: Prof. Jinwoo Shin — *Jul. 2026 - Present*

- First-authoring *Scaling World-Model Supervision for Computer-Use Agents*
- Leading the data-scaling subproject for the LLM-based world model of a computer-use (GUI) agent, covering supervision synthesis, curation, and scaling.

Human-Computer Interaction Lab, Seoul National University — *Seoul, S.Korea*

Research Intern, Advisor: Prof. Jinwook Seo — *Dec. 2025 - Jun. 2026*

- Co-authored *DirectVis: Editing Code-Based Interactive Visualization with Direct Manipulation*, accepted as a short paper at IEEE PacificVis 2026.
- Co-authoring *Revisiting Map Projections for Geospatial Data Analysis: Task Taxonomy, Empirical Study, and Guideline* for submission to IEEE TVCG 2027.
- Led the development of an interactive diffusion-based image editing system that supports user intervention during denoising and improves iterative editing workflows via restart and refinement strategies.

DeepAuto.ai — *Seoul, S.Korea*

Intern — *Jan. 2025 - Feb. 2025*

- Led the development of the *DeepTutor.ai* AI demo platform to showcase Long-Context Reasoning technology for clients and investors.
- Designed the overall concept and content of the demo site to effectively communicate technical capabilities while maximizing user engagement.
- Built the end-to-end front-end and performed prompt engineering to improve system robustness and interaction reliability.
- Collaborated with *VMOSTER* to integrate their interactive AI avatar services into the demo platform.
- Enhanced user interaction flows and user experience across the platform through iterative design refinements.

Publication

Scaling World-Model Supervision for Computer-Use Agents — *Working Paper*

Hyunseo Yang, Byungwoo Jeon, Jinwoo Shin — *Expected 2026*

- Designed the annotation schema and built the end-to-end pipeline that extracts, annotates, and filters the supervision.
- Implemented the two-stage SFT and GRPO training pipeline and analyzed the resulting model behavior.

DirectVis: Editing Code-Based Interactive Visualization with Direct Manipulation — *IEEE Pacific Visualization Conference 2026 Short Paper*

Jeongin Park, Mingyu An, Hyunseo Yang, Junhyeong Hwangbo, Min Hyeong Kim, Hyeon Jeon, Jinwook Seo — *Apr. 2026*

- Designed system functionalities and detailed workflows.
- Designed and implemented LLM-based features enabling novice users to accurately and efficiently specify interactions within visualizations.
- Conducted user study sessions and led statistical analysis of survey responses and behavioral logs to evaluate system effectiveness.

Projects

Creating Robot Artificial Intelligence Project (CRAIP)

Project Member — *Sep. 2025 - Dec. 2025*

- A multi-module ROS2-based autonomous navigation system for a quadruped robot (Unitree Go1) in a Gazebo simulation environment.
- Developed and integrated core robotics modules including localization, perception, and path tracking.
- Built a YOLO-based perception pipeline for object classification and behavior triggering.
- Integrated an LLM-based command interface for natural-language robot control.

Honors & Awards

Awards

2026 **Second Place**, Future Finance Talent Competition (Blockchain Division), Hanwha Life *Seoul, Korea*

2025 **First Place**, Deep Learning Hardware Design Contest, POLARIS Next-Generation Semiconductor Convergence Innovation University Program Group *Seoul, Korea*

Scholarships

2025 **National Scholarship**, Korea Student Aid Foundation (Mar. 2025 - Present)

2025 **Yudang Scholarship**, Yudang Scholarship Foundation (Mar. 2025 - Present)

Certificates

2022 **Craftsman Information Processing**, Human Resources Development Service of Korea

2024 **Test Of Economic Sense And Thinking**, The Korea Economic Daily

Skills

Programming Java, Python, C/C++, OCaml, Verilog, LaTeX

Front-end React, D3.js, HTML/CSS

Languages Korean (Native), English