SANGHYUN HAHN

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EDUCATION

SEOUL NATIONAL UNIVERSITY   February 2026
  B.S. in Mechanical and Aerospace Engineering (Aerospace Major)   GPA: 4.13/4.30

SEOUL SCIENCE HIGHSCHOOL   February 2020
  Specialized in mathematics and physics   GPA: 4.16/4.30

RESEARCH EXPERIENCE

SEOUL NATIONAL UNIVERSITY   Seoul, Korea
Undergraduate Research Intern, SNU RPM   2023.07 – 2024.07
Advisor: Ayoung Kim

  LiDAR–Thermal HUSKY UGV Platform
    Developed hardware for LiDAR–Thermal camera system on HUSKY UGV. Experience
    in LiDAR-Camera calibration, ROS, circuit design, machining, soldering.

  Quantitative 3D Map Accuracy Evaluation Hardware and Algorithm for LiDAR SLAM
    Established target-based accuracy evaluation metric for 3D point cloud maps generated
    by SLAM. Published to ICCAS 2024.

Undergraduate Research Intern, SNU LARR   2023.09 – 2025.03
Advisor: Hyoun Jin Kim

  Enhanced Initialization for Gaussian Splatting
    Added random initialization for sparse regions and opacity initialization from 3D
    reconstruction error to enhance performance of 3D Gaussian Splatting.

Undergraduate Research Intern, SNU MPR   2025.04 – Present
Advisor: Jonghyun Choi

  Gaussian Splatting as SE(3) Equivariant Features for Imitation Learning
    Transformed imitation learning parallel gripper manipulation into a 3D matching
    problem. Achieved one-shot imitation learning with gaussian features obtained from 3D
    Gaussian Splatting.

  Action Chunking Proximal Policy Optimization for Universal Robotic Dexterous Grasping
    Applied action chunking to dexterous grasping by reinforcement learning.
    Under review at ICLR 2026.

AWARDS AND HONORS

The National Scholarship for Science and Engineering (2020 ~ 2024)
SNU Student-Directed Education Undergraduate Research Program (2024)

RESEARCH INTERESTS

Dexterous Manipulation, Humanoids, Robot Learning, Computer Vision

PUBLICATIONS

"Quantitative 3D Map Accuracy Evaluation Hardware and Algorithm for LiDAR(-Inertial) SLAM"
Sanghyun Hahn, Seunghun Oh, Minwoo Jung, Ayoung Kim, Sangwoo Jung
Co-first Author, ICCAS 2024: https://www.arxiv.org/abs/2408.09727

"Action Chunking Proximal Policy Optimization for Universal Robotic Dexterous Grasping"
Sanghyun Hahn, Jonghyun Choi
First Author, IEEE Humanoids 2025 - Workshop on Dexterous Human Manipulation (non-archival), Under review at ICLR 2026.

PROFESSIONAL EXPERIENCE

ELBROWN LEADERS COMMUNITY   Seoul, Korea
Translator   2020.02 – 2020.07
Translated general chemistry and physics questions from English to Korean.

Teacher, Department of Gifted Education   2020.12. – 2021.12
Taught mathematics for the entrance exam of Seoul National University to students at Daejeon Science High School and Hankuk Academy of Foreign Students. Also mentored students for selecting majors.

Teacher, Department of Highschool Education   2023.04. – 2023.12
Taught mathematics for exams of Korean Minjok Leadership Academy.

TECHNICAL SKILLS

Languages: English, Korean
Programming: Python, C
ML / DL: Pytorch, JAX
Robotics: ROS, Isaac Gym, Issac Sim
Hardware: Welding, Soldering, Machining, Circuits, LiDAR, Thermal camera

TEACHING EXPERIENCE

SEOUL NATIONAL UNIVERSITY   Seoul, Korea

SPLIT Tutor in Physics   2022.01 – 2022.02

Tutored freshmen in general physics before joining in the spring semester. Gave out lectures weekly and reviewed process from homework.

Seminar Organizer   2025.09 – 2025.12

Reinforcement Learning for Robotics

Founded and ran a weekly, peer-led seminar. Proposed the seminar, designed the syllabus, selected papers, and coordinated presenter schedule.

LEADERSHIP AND SERVICE

Reviewer – IEEE RA-L, 2024
Supply Specialist – Republic of Korea Army (ROKA), 2022
Powertrain Team Leader – Seoul National University Student Formula Team, 2021