

Hyoung-seo Son

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EDUCATION

Northeastern University, Boston, MA, USA Fall 2024–Present

Ph.D. Student in Mechanical Engineering, Advisor: Seungmoon Song

GPA: 3.96/4.0

Coursework: Reinforcement Learning and Sequential Decision Making, Deep Learning, Machine Learning, Theory of Optimization, Human Movement Simulation, Wearable Robotics

Kyungpook National University, Daegu, South Korea 2018–2021

B.S. Mechanical Engineering, Minor in Computer Science and Engineering

Summa Cum Laude (1st/152), GPA: 3.84/4.0, Early Graduation (3 years)

RESEARCH INTERESTS

Physics Simulation, GPU-Accelerated Simulation, Reinforcement Learning, Deep Learning, Differentiable Simulation, Dimensionality Reduction

RESEARCH EXPERIENCE

NeuMove Lab, Northeastern University 2024–Present

Ph.D. Student, Advisor: Seungmoon Song

- Released [MyoAssist](#), an open-source tool for simulating human movement and assistive devices [\[github\]](#)
 - Co-led a 4-hour hands-on tutorial at ASB 2025 with over 80 attendees
- Poster session at Northeast Robotics Colloquium (NERC) 2024, UMass Amherst

CAE/CAD Lab, Kyungpook National University 2019–2021

Undergraduate Researcher, Advisor: Young-suk Kim

- Developed a program to find equations fitting multidimensional data with randomized tree growth
- Automated strain-stress curve graph figure generation

PUBLICATIONS

1. “Development of a Novel Plastic Hardening Model Based on Random Tree Growth Method”
H.S. Son, Y.G Kim, J.J. Kim, Y.S. Kim, Korean Journal of Metals and Materials, (2020),
<http://dx.doi.org/10.3365/KJMM.2020.58.11.741>

INDUSTRY EXPERIENCE

Gachisoft Inc., Daejeon, South Korea 2021–2024

Software Research Engineer

- Built Logistics Digital Twin System deployed at two [Korea Post](#) sites
- Developed 3D vision system for [Coupang](#); integrated with PLC for real-time equipment control (C++, OpenCV)

HONORS & AWARDS

Precision Neuroscience BCI Hackathon, 1st Place (\$1,000) [\[github\]](#) [\[video\]](#) 2026

By Precision Neuroscience, at Microsoft NERD Center, Boston, MA

R-BIZ Challenge, Presidential Award (KRW 3,000,000) [\[link\]](#) 2019

National robotics competition, Team Leader, awarded by former President Moon Jae-in

The National Scholarship for Science and Engineering, Full Tuition (100%) 2020

By Ministry of Education, South Korea

Scholarship for Academic Excellence, Full Tuition (100%) 2018–2019

By Kyungpook National University

SKILLS

Programming: Python, C/C++, C#, Java, Kotlin, JavaScript

Frameworks & Tools: PyTorch, TorchRL, Stable-Baselines3, MuJoCo, React, OpenCV, OpenGL, Unity, Blender, Git, L^AT_EX