

Minjong Kim

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Education

Ulsan National Institute of Science and Technology (UNIST)

Mar. 2020 - present

- B.S. in Mechanical Engineering
- Total GPA: 4.20/4.30 In-Major GPA: 4.26/4.30
- Relevant Coursework:
 - BME307 Biomechanics
 - MEN461 Introduction to robotics
 - MEN573 Advanced Control I

Research Interests

My research interests include lower-limb wearable robots, gait augmentation, and human–robot interaction. I am particularly focused on improving gait performance and generating optimal motion patterns to enhance human mobility, with long-term applications in sports and performance augmentation.

Research Experience

Wearable Robotics Laboratory

Dec. 2024 - present

Undergraduate Research Intern, Advisor: Jinsoo Kim, PhD

Seoul, South Korea

- Built a gait analysis pipeline using motion capture data, enabling kinematic extraction and gait event detection.
- Implemented a real-time IMU-based gait metric and validated results against motion capture-derived reference measures.

Ergonomics Laboratory

Jan. 2024 - Dec. 2024

Undergraduate Research Intern, Advisor: Gwanseob Shin, PhD

Ulsan, South Korea

- Developed a predictive model for floor impact noise using gait acceleration features collected from human walking trials.
- Designed a robotic control algorithm for a shoulder arthroscope based on surgeon head-motion tracking.

Awards and Honors

National Scholarship for Science and Technology

Spring 2024 - present

Dean's List

Spring 2023, Fall 2024

UNIST Global Scholarship for the Exchange Student Program

2020

Activities

Student Council of Mechanical Engineering

Mar. 2023 - July 2025

Social Services Personnel (Alternative Military Service)

Mar. 2021 - Dec. 2022

Skills

Programming Languages: Python, MATLAB

Software: ROS1, CATIA, Fusion360

Biomechanical Equipment: Motion Capture Systems (OptiTrack, Vicon), Instrumented Treadmill (Bertec), Force Plates (Zebris), IMUs

Fabrication: 3D Printing, Laser Cutting

Languages: Korean (native), English (intermediate)