

Jay Moon

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EDUCATION

University of Illinois Urbana-Champaign

AUG 2024 - Present
(on leave for military service)

B.S in Industrial Engineering

GPA: 4.0/4.0

RESEARCH

CRAFT: A Tendon-Driven Hand with Hybrid Hard-Soft Compliance

RSS 2026 - <https://craft-hand.github.io/>

JAN 2025 - MAR 2026

- Designed an open-source anthropomorphic robotic hand with hybrid hard-soft compliance for contact-rich manipulation
- Outperformed rigid baseline in strength, endurance, and manipulation of fragile objects across standardized benchmarks
- 100% success rate on delicate object grasping (eggs, chips, raspberries); full coverage of all 33 Feix grasp types
- Full hardware (~\$600), simulation models, and teleoperation code released open-source

PROJECTS

Robotic Hand - Mirrors hand movement through gyro sensor glove

FEB 2023 - OCT 2023

Personal Project - <https://seji.artstation.com/projects/OGZrey>

- Designed and 3D printed a servo-driven robotic hand, iterating through 6 prototypes to refine joint geometry and actuation
- Integrated with a gyro sensor glove to mirror finger movements in real time

EXPERIENCE

KATUSA (Korean Augmentation to the U.S. Army), Eighth Army

OCT 2025 - Present

Korean-English Translator | Daegu, South Korea | Participated in Freedom Shield 2026

- Supported joint ROK-U.S. military exercises including Freedom Shield, providing real-time Korean-English interpretation for 12-hour shifts during the exercise period.

EXTRACURRICULAR

MechSE MakerWorks

Volunteer

2024 - Present

- Volunteer 4 hours weekly teaching university students to safely operate makerspace equipment including PLA & resin 3D printers, and laser cutters.

Robotics

President

2022 - 2024

- Led robotics club of 14 members, teaching CAD and mechanical design
- Won Innovate Award, First Tech Challenge 2023 Taiwan
- Taught robotics fundamentals to younger students using LEGO Mindstorm at school open house events

3D-modeling

Hobby

2019 - Present

- Design detailed original mecha models optimized for 3D printability using Blender and Fusion360
- Design, 3D print, and paint resin jewelry

TECHNICAL SKILLS

Fusion 360, Blender, Python, Arduino, FDM & SLA printing

Language: Korean (Fluent), English (Fluent), Japanese (Intermediate)