Hanvit Cho

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EDUCATION

Stanford University | Stanford, California **September 2023 – May 2025 (Expected)**
- M.S. in Mechanical Engineering.

University at Buffalo - State University of New York (SUNY) | Buffalo, New York **August 2020 – May 2023**
- B.S. in Mechanical Engineering. GPA: 4.0/4.0

Work Experience

Robotics Internship **Centrillion Technology**
Full-time intern **June 2024 – Present**
- Applied the Trossen Robotics' Mobile ALOHA (Bimanual Mobile Manipulation) to automate manufacturing processes through imitation learning, enabling robots to mimic human actions.
- Experimented with various policy algorithms in diverse environments to optimize robotic performance.

Sun-Signs Engineering Internship **University at Buffalo**
Unpaid part-time intern **February 2022 – June 2022**
- Created a miniature solar device which attached to street signs for navigating in the winter.
- Designed the prototype as the best design using CAD and printed it using 3D printer with PLA filament.

RESEARCH EXPERIENCE

Collaborative Haptics and Robotics in Medicine Lab **Stanford University**
Graduate researcher **March 2024 – June 2024**
- Led the redesign of the base station for a vine-like robot, focusing on achieving a reliable sealing mechanism to maintain high pressure (up to 15 PSI).
- Developed and tested various sealing methods, including gaskets and thread sealants, to ensure airtight connections.

Salisbury Robotics Lab **Stanford University**
Graduate researcher **March 2024 – June 2024**
- Contributed to the development of robotic Emergency Medical Technician (rEMT) by using Kinova Gen 3, Bota force sensor, and Haply Inverse-3 haptic device.
- Created advanced motion control and haptic perception capabilities, enabling the rEMT to perform sensitive medical tasks, such as palpating tissues to assess stiffness.

Stanford Biomechatronics Lab **Stanford University**
Graduate researcher **September 2023 – May 2024**
- Focused on the development of exoskeleton technology to assess and enhance human walking balance.
- Tested human-subjected gait data based on several balanced metrics and determining how to declare which gait is balanced.

Adaptive Design Algorithms, Models & Systems Lab **University at Buffalo**
Undergraduate researcher **February 2022 – May 2023**
- Programmed ground robots (e-puck2) and aerial robots (crazy-fly) using C++ and Python.
- Did experiments in the motion capture lab using Vicon Tracker to control the swarm robots at the same time.

HONORS AND AWARDS

Dean's List | University at Buffalo **Spring 2021 – Spring 2023**
International Scholarship | University at Buffalo **Fall 2020 – Spring 2023**
- $3,500 per semester in a row

Citation of the Commander | Defense Security Support Command **April 2019**
- Using C# and MySQL, developed a DB management program which detects threats related to computer security.

PUBLICATIONS

Fast Decision Support for Air Traffic Management at Urban Air Mobility Vertiports Usin IROS 2023
KrisshnaKumar, P., Witter, J., Paul, S., **Cho, H.**, Dantu, K., Chowdhury, S.

Framework for Analyzing Human Cognition in Operationally-Relevant Human Swarm Interaction ASME 2023
Distefano, J., **Cho, H.**, KrisshnaKumar, P., Esfahani, E., Chowdhury, S.

COMPUTATIONAL SKILLS

Languages:	C (Expert), C# (Expert), Python (Expert), Java (Intermediate), JavaScript (Intermediate)
Applications:	ROS (Expert), MATLAB (Expert), SOLIDWORKS (Expert), Adobe Inventor (Expert)
Engineering Skills:	Motion capture using Vicon Tracker (Expert), 3D printing (Expert), Milling machines (Expert)