Camille Chungyoun
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Personal Website

EDUCATION:

Master of Science – Mechanical Engineering; Concentration – Robotics and Kinematics
Stanford University, *Stanford, CA* **Graduated June 2024**
Cumulative GPA: 3.93 | Amazon Robotics Day One Fellow

- Relevant Courses: Principles of Robot Autonomy, Collaborative Robotics, Advanced Robotic Manipulation, Deep Learning for Computer Vision, Advanced Dynamics & Computation, Decision Making Under Uncertainty

Bachelor of Science – Mechanical Engineering; Concentration – Mechatronics
University of Washington*, Seattle, WA* **Graduated June 2022**
Cumulative GPA: 3.77 | Major GPA: 3.85 | Dean's List Honors: 10 academic quarters

- Relevant Courses: Embedded Computing, Kinematics, System Dynamics, Instrumentation, Automatic Control

ROBOTICS EXPERIENCE:

Vicarious Surgical, Waltham, MA **July 2024 – Present**
V&V Robotic Systems Engineer Manager: Lisa Futato

- Spearheaded verification of the robotic camera subsystem by programming a multitude of Python tests to collect data, analyze camera capabilities, and troubleshoot software issues
- Implemented a complex test station using a robotic arm and sensors to evaluate camera visualization and joint articulation performance
- Developed formal test cases and protocols while collaborating with product engineering teams

Integration and Testing Engineering Co-op Manager: Joshua Katz

- Contributed to a testing system to verify performance of cameras and robot arms for a surgical robot system
- Implemented image analysis and correction features for the camera and performance tests for the robot arms

Assistive Robotics and Manipulation Lab, Stanford University **January 2023 – September 2024**
Robotics Researcher PI: Dr. Monroe Kennedy III

- Collected hundreds of RGB-D images and aided in control formulation used by DenseTact 2.0 (an optical tactile sensor modeled after the human fingertip) to categorize screws and other small objects
- Co-authored "*Inter-finger Small Object Manipulation with DenseTact Optical Tactile Sensor*", published in IEEE RA-L and presented at ICRA 2024
- Designed and tested 19 machine learning models to classify the number of layers of cloth rubbed between DenseTact 2.0 sensors, with the best model achieving 98.21% accuracy
- Co-first authored "*Dynamic Layer Detection of Thin Materials using DenseTact Optical Tactile Sensors*", published and presented at IROS 2025

Amazon Robotics, Westborough, MA **June 2023 – September 2023**
Research Scientist Intern Manager: Dr. Joshua Migdal

- Designed and automated a process to create 3D models of products using Agisoft Metashape and Python
- Analyzed the quality of 3D models geometrically and by using machine learning segmentation

MECHANICAL ENGINEERING EXPERIENCE:

Kohler Company, Kohler, WI **June 2021 – September 2021**
Mechanical Engineering Intern Manager: Robert Guthrie

- 3D modeled, implemented, and tested scent metering and pausing features for a device that provides a scent to the water during a shower to enhance the experience and promote different moods

Fabrication Research Lab, University of Washington **July 2020 – October 2020**
Custom PPE Designer and Research Assistant Mentor: Colleen Carroll

- Designed custom optical device PPE during the COVID-19 pandemic for a binocular indirect ophthalmoscope, a device used by eye doctors, alongside one other undergraduate student

Ubiquitous Computing Lab, University of Washington **March 2020 – June 2020**
Medical Device Designer and Research Assistant Mentor: Manuja Sharma

- Constructed a cough box to assess a person's health based on acoustic properties of their cough

SKILLS:

- ROS, ROS 2, MoveIt!, Gazebo, Python, PyTorch, TensorFlow, C, C++, MATLAB, OpenCV, SolidWorks, Git, Creo, Agisoft Metashape, Imatest, Jira