

Yeonjin Kim

Cleveland, OH | 720.492.5328 | jinkim10237@gmail.com | [linkedin.com/in/ykim1023](https://www.linkedin.com/in/ykim1023) | [Engineering Portfolio](#)

EDUCATION

Case Western Reserve University, Cleveland, OH

Bachelor of Science in Mechanical Engineering

May 2027

GPA 3.9/4.0

Minor: Biomedical Engineering, Business Management

Relevant Coursework: Mechanical Manufacturing, Dynamics, Biophysics I & II, Signals and Systems, Statistics

SKILLS

Software: Minitab, R, Python, MATLAB, Arduino, Ansys, MS Office, CAD (SolidWorks, Fusion 360)

Technical: CAD Design, Data Analysis, Usability Testing, Prototyping (3D Printing, Laser Cutting, Machine Shop Skills)

Professional Attributes: Medical Devices, Certified SolidWorks Associate, Six Sigma Yellow Belt

WORK EXPERIENCE

Mechanical Engineering Co-op, Johnson and Johnson MedTech, *Palm Beach Gardens, FL*

Jan 2026 – Jul 2026

- Investigated large and small limb surgical applications to help define the focus of project scope in pre-charter phase.
- Developed power tool features through data analysis using Python and MATLAB to facilitate surgeon's workflow.
- Analyzed statistically in Minitab to validate test procedure and remove user variability to test accuracy of features.
- Designed multi-variant saw performance test using DMAIC process to collect accurate data for product release.

Mechanical Research Intern, Metro Health Rehabilitation Institute, *Cleveland, OH*

May 2025 – Dec 2025

- Researched upper limb anatomy to design 10+ ergonomic 3D-printed handle models (Fusion 360) for ride-on cars, targeting different anatomical movements to improve hand mobility for neurologically impaired children.
- Streamlined electronic integration of handle models and control board, reducing test set up by 30% between users.
- Collaborated with cross-function team of 8+ engineers to deliver integrated upper limb therapeutic device.

Biomedical Engineering Intern, Denver Health Hospital, *Denver, CO*

Oct 2021 – Jan 2022

- Conducted annual maintenance of 50+ ventilators and pulse oximeters to uphold patient safety and care quality.
- Upheld compliance with medical device safety standards following FDA regulations for optimizing patient safety.
- Created weekly recalibration plan, reducing overdue maintenance tasks by 20% to minimize downtime in patient care.

PROJECTS

Suture Grasper, *Ewha Woman's University*

Jun 2024 – May 2025

- Drove multiple design iterations of housing for surgical grasper that follows index finger movement using Fusion 360 while prioritizing usability and surgical process, to enhance user experience by increasing the range of rotation.
- Programmed Arduino controllers to optimize encoder-motor communication, increasing response time by 50%.
- Performed reliability testing on motor across 50+ cycles following Six Sigma analyzing mechanical failures.

4 Valve Motorcycle Engine, *Design and Manufacturing II*

Aug 2025 – Dec 2025

- Engineered CAD (SolidWorks) for valve assembly and cylinder head while collaborating as a team of 10 students.
- Spearheaded material selection of 100+ components of engine considering function and integration using Ansys.
- Selected manufacturing method of 50+ components including heat treatment, forming, and casting, following DFM.
- Authored and presented following design control to advocate for the developed engine to stakeholders.

COMMUNITY LEADERSHIP

Vice President of Finance, *Undergraduate Student Government*

Aug 2025 – Dec 2025

- Directed and allocated 300+ student organization's finance ensuring diverse representation of student body.
- Led 10+ student committee and communicated with 600+ student leaders and faculties providing everyday support.

Treasurer, *CWRU MedWish (MedWish Medworks)*

Jan 2025 – Dec 2025

- Managed club's finances to recalibrate 20+ medical equipment to donate to underserved global communities.
- Customized 10+ toys to target children with neurological impairments by machining, soldering, and 3D printing.