

Taewon Yoon

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EDUCATION

Northwestern University

B.S. in Manufacturing and Design Engineering

Evanston, IL

Anticipated June 2026

- GPA: 3.83/4.00 | Honors: 2022, 2023 Fall, 2024 Winter, 2024 Spring | High Honors: 2023 Spring

WORK EXPERIENCE

Automatic Resistor Cutter

Evanston, IL

Position: Manufacturing Lead Client: nScope

March 2024 – June 2024

- Worked along with three fellow students to reduce package time for 10000 electronic kits with 50+ components
- Spearheaded development for an automated resistor cutting system: modeling using Solidworks, prototyping using laser cutting acrylic and 3d printing parts, utilizing stepper motors for control, and using Raspberry Pi for system
- Fully automated resistor package process and reduced total kit package time for resistors by 220+ hours

The 120

Evanston, IL

Position: Designer

January 2024 – March 2024

- Hand-crafted a low-profile reclining chair with adjustable angles between 100–140° and interchangeable colors using plywood, upholstery foam, and fabric, without using screws and glue
- Designed and constructed and tested three full-scale prototypes for user testing using Solidworks and CNC machine
- Published a 182-page design process book using Adobe Illustrator, Photoshop, and InDesign

Cart in Basket

Evanston, IL

Position: Manufacturing Lead Client: Judy Geigner

January 2023 – March 2023

- Collaborated in a team of four to design and construct a specialized cart for patients with arthritis and Parkinson's disease, to move objects to different locations at different heights
- Led the prototype's manufacturing process, starting with initial hand-drawn sketches and selecting cost-effective materials to constructing a functional prototype within a \$200 budget
- Wrote a comprehensive final report and presented the final product to client

ACTIVITIES

Northwestern Formula Racing Team

Evanston, IL

Suspension Team Hubs Sub-team Member

June 2023 - June 2024

- Redesigned the rear hub using Solidworks, achieving a 14% weight reduction while ensuring structural integrity
- Conducted finite element analysis for four driving situations to verify mechanical reliability of the project
- Developed a geometric dimensioning and tolerancing to send to an outsourced manufacturing partner
- Designed and manufactured two rear hub caps using Fusion 360 to generate a G-code for CAM and CNC machine

Suspension Team Steering Sub-team Member

September 2022 - June 2023

- Cooperated with two other students to design, optimize, and manufacture steering system for the 2022-23 vehicle
- Calculated optimum length of steering columns to satisfy suspension geometry and driving qualifications
- Removed torsional play in steering columns by welding the steering columns instead of using pins
- Improved pillow block design by reducing 33% weight while satisfying suspension geometry using Solidworks
- Manufactured jigs, steering columns, and pillow blocks using the mill and lathe with ± 0.001 tolerance

LEADERSHIP EXPERIENCE

Korean American Student Association

Evanston, IL

Publicity Team Graphics Chair

June 2023 – Present

- Led the Publicity team in the creation of visual content to promote Korean culture at Northwestern University
- Planned and managed a schedule for ideation, production, and promotion of marketing materials for club events
- Redesigned club logo using typography to represent the club's cultural identity in both English and Korean
- Designed and introduced mascots for the first time in club history to encourage member engagement using Adobe Illustrator, resulting in 18% year-on-year increase in new member recruitment

OTHER INFORMATION

Computer: Adobe Illustrator, Photoshop, InDesign, Matlab, Microsoft Office, Python, Slack, Solidworks, Fusion360, NX, Figma

Construction: Proficient in using the CNC machine, laser cutter, lathe, and mill

Language: Fluent in English and Korean, Professional working proficiency in Japanese

Interests: Graphic Design, Pencil Drawing, Skateboarding, Soccer

Military Service: ROK Army, Rank: Sergeant

September 2020 – March 2022

Websites: Portfolio: <https://tw-yoon.github.io> LinkedIn: www.linkedin.com/in/taewony