Julie Nam

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EDUCATION

Cornell University, College of Engineering, Ithaca, NY — Expected: May 2027
Bachelor of Science in Mechanical Engineering, GPA: 3.498

Relevant Courses: Mechanical Design, Dynamics, Statics, Fluid Mechanics, Thermodynamics, System Dynamics, Mechanics of Engineering Materials, Waves*, Mechatronics*, Heat Transfer* (*Spring 2026**)*

TECHNICAL EXPERIENCE

Cornell Space Structures Lab, *Undergraduate Researcher* — May 2025 – August 2025

- Designed PLA mold prints using Fusion 360 to create silicone molds for composite manufacturing
- Ran FEA simulations of plate deformations under pressure with Abaqus, reducing deformation by 92.3%
- Manufactured composite layups using silicone molds to scan for imperfections and compare to FEA results
- Awarded $2,712 by Boeing after submitting proposal to the Cornell Office of Inclusive Excellence
- Attended biweekly meetings to meet with PhD students to give update on progress and discuss plans for project

NASA L'SPACE Mission Concept Academy, *Mission Assurance Specialist* — June 2025 – August 2025

- Worked in a team of 18 people on a virtual NASA space mission, up to the submission of a 243-page Preliminary Design Review of the mission life cycle
- Created a Gantt chart and budget table to meet $450M budget and launch readiness date of Dec. 1, 2029
- Led the mission assurance portion of the mission, ensuring risks were identified, analyzed, and mitigated
- Developed a risk mitigation chart, risk matrix, and failure mode effect analysis to ensure safe practices in the workplace throughout all phase of the mission while creating mitigations plans for 32 risks
- Presented a 30-minute Preliminary Design Review presentation in front of a Standing Review Board

PROJECTS

Torque Wrench Design Project, *Mechanics of Materials Project* — December 2025

- Designed a torque wrench using Fusion 360, meeting target strain gauge readings under a given loading value
- Optimized dimensions and materials to satisfy yield, crack growth, and fatigue safety factors
- Simulated stress, strain, and deflection in ANSYS under specified boundary and loading conditions
- Calculated stress, strain, deflection, and safety factor values using MATLAB to validate FEA results

Adapt-a-bit, *Intro to Mechanical Design project* — January 2025 – May 2025

- Created a multiuse keychain case that integrates a screwdriver and tape measure with a team of 3 people
- Researched and interviewed 10 people to focus on a common design problem faced by them
- Built 4 prototypes using Fusion 360 and 3D printing, incorporating feedback from TAs in each iteration
- Tested the quality of the prototype through a stacking test, drop test, and size test
- Developed a Pugh matrix chart to decide on which prototype has the potential to be further developed into a final model, focusing on size, storage, ease of use, and safety

WORK EXPERIENCE

Undergraduate Teaching Assistant, *Intro to Mechanical Design* — January 2026 – Present

- Held weekly office hours to mentor students on design concepts and CAD tools to complete their projects
- Supported a class of ~200 students by covering lab sections and assisting in assignment development

VIRTUAL TRAININGS

Siemens Xcelerator Academy — July 2025 – Present

- Enrolled in an online learning portal to gain knowledge of Siemens NX and prepare for the Siemens NX Design Associate Certification exam, completing a total of 40 hours of lessons and hands-on practice

SKILLS

Design: Fusion 360, MATLAB, Abaqus, Siemens NX, Bambu Studio
Computer Software: Excel, Python, HYML, CSS, Google Suite, Microsoft Office
Hands-on Manufacturing: 3D printing, power tools, metal and woodcutting, drilling press
Languages: English (fluent), Korean (fluent)