HELENA YOUNG

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EDUCATION

Northwestern University, Evanston, Illinois
Bachelor of Science in ***Mechanical Engineering,*** concentration in ***Robotics*** | Minor in ***Computer Science*** Anticipated 6/26
Cumulative GPA: **3.93/4.0**
Relevant Courses: Mechanics of Materials, Machine Dynamics, Electronics Design, Design Thinking and Communication, Fundamentals of Computer Programming, Fluid Dynamics, Thermodynamics and Statistical Mechanics

EXPERIENCE

Interactive and Emergent Autonomy Lab, Northwestern University | Evanston, Illinois
Undergraduate Researcher 1/24 - present | full-time summer 2024

- Design (CAD) and implement a soft-materials stewart platform inspired robot used to study effects of materials selection–especially material stiffness–on speed and effectiveness of robotic learning.
- Manufacture components with 3D printer, laser cutter, router, and assemble using rapid prototyping techniques.
- Program a vision system, cascading PID controller, and LSTM neural network, and integrate using ROS2.
- Coordinate and perform experimentation and data gathering, and choose appropriate data visualization strategies.

University of California Davis | Davis, CA
Mechanical Engineering Research Intern 6/23 - 9/23

- Designed a custom mount for a newly developed early detection wildfire sensor.
- Identified and sourced essential components and materials required for the mount's construction, ensuring cost-effectiveness and timely project execution.
- Collaborated closely with a UC Davis professor to exchange and refine design concepts, ensuring that the mount design aligned with the diverse environmental compatibility needs.
- Prioritized the practicality of the mount by designing it to be easily transportable and quick to set up on-site.

NASA Johnson Space Center | Houston, TX (remote)
Robotics Design Intern 6/22 - 9/22

- Created computer-aided design (CAD) renders of parts for the Lunar Terrain Vehicle Ground Test Unit.
- Coordinated and delegated tasks with other interns and professionals, using Microsoft Excel.
- Communicated progress through daily presentations and made modifications to CAD based on feedback.
- Identified products for purchase that best matched department needs for better workplace productivity.

LEADERSHIP & AWARDS

Northwestern University Engineers for a Sustainable World, *Mechanical Design, Treasurer* 9/23 - present

- Design and implementation of robotic automated adjustable lighting system for AutoAquaponics team.
- Manage purchasing and finances across subteams, keep ledger books and coordinate grant applications

Northwestern University Peer Adviser 6/23 - present

- Lead a group of ten new Northwestern engineering students through new student orientation and their first year.
- Present content weekly on relevant topics including time management and communication with professors

FIRST Robotics Competition Team 1678, *Operator, Robot Design, Alumni Relations Lead* 9/18 - 6/22

- Designed robot mechanisms to complete competition tasks efficiently, and machined parts for the designs.
- Collaborated with peers to integrate diverse mechanisms, ensuring seamless functionality.

Best Overall Research Presentation, *Northwestern Undergraduate Research Exposition* 5/24

Dean's List High Honors, *Northwestern University McCormick School of Engineering* 10/22 - present

SKILLS

Language: Spanish (fluent), **Computer:** Solidworks, NX, Onshape, Python, C, C++, Matlab, Java, Robot Operating Systems (ROS2), Git, and Microsoft Office.