

Jessica Healey

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Creative self-starter with a passion for mechanical engineering, robotics, and design.



Education

Northeastern University—Boston, MA

May 2024

Candidate for BS in Mechanical Engineering | Experience Design Minor | Honors Program | GPA: 3.95

John Jay High School—Hopewell Junction, NY

Class of 2020

Valedictorian / 522 Students

- National Merit Finalist, STEM Program Naval War College, July 2018: Marine engineering program

Work Experience

PARSES Laboratory—Northeastern University

July 2023—current

- Assembled negative pressure control board for pneumatically controlled Kresling-inspired units
- Assisted in development of open / closed-loop control code, and integration of capacitive sensors with flexible actuation

Amazon Robotics—Westborough, MA

Jan—June 2023

Robotics Engineer Co-op

- Mechanical Engineer for the early research and development Innovation Lab
- Completed short turnaround projects, demonstrating advanced capabilities in manipulation and warehouse robotics
- Expanded skills in software, mechanical design, rapid prototyping, and large-scale process improvements

Institute for Experiential Robotics—Boston, MA

Jan—June 2022

Mechanical Engineering Co-op

- Contributed to E-Robot: an attic-retrofitting robot project, team was National Finalist for U.S. Department of Energy
- Aided in building a convoy of remote-controlled cars for testing autonomous convoy track-and-follow algorithms
- Designed, fabricated, and installed modules, mounts, test beds, and parts for various projects and personal project
- Managed 3D CAD and printing for the institute, improved material sustainability

Publications and Projects

Project Origami—PARSES Laboratory Northeastern University

July 2023—current

- [“Controlling the Fold: Proprioceptive Feedback in a Soft Origami Robot.”](#) Kristen L. Dorsey, Nathaniel Hanson, Sonia F. Roberts, Immanuel Ampomah Mensah, Celina Wu, Jessica Healey, Donelle Furline, Jr. Under peer review.

Hydrilla Hunter (Capstone Project)—Northeastern University

May—Dec 2023

- Proposed idea of a surface vehicle to identify and track an invasive aquatic plant and built a team
- Collaborating with the Connecticut Agricultural Experiment Station to improve manual data collection
- Designing, validating, and manufacturing a custom multihull marine device for a hyperspectral camera
- Formulating a control scheme for thrusters, ensuring proper material cooling, and integrating with an EECE team

Waterway Robot—Independent

Jan 2021—June 2022

- Conceptualized and built a robot that cleans trash from waterways, presented work at NU Research Expo RISE
- Sourced sustainable materials, designed CAD and URDFs to model the robot, teleoperated the model using ROS
- Future work: inspire the public with a connected website or art generated by its path

Generate (Product Development Organization)—Northeastern University

Sept 2022—current

- Spring '23 Hardware Engineer: improved date-cutting machine to triple the number of dates cut per minute
- Fall '22 Hardware Engineer: created deployable solar panel array for house boats

Forge (Product Development Organization)—Northeastern University

Feb 2021—May 2022

- July '21—May '22 Outreach Director: established, hired, and managed the marketing and branding team
- Spring '21 Member: ideated and constructed a mask sanitation product

NU Science Magazine—Northeastern University

Sept 2020—2022

- Researched, designed, and published 250 to 750-word articles on [marine engineering, forensics, and materials science](#)

Experience Design Projects—Independent and Northeastern University

July—Aug 2021

- Designed, wired, and coded painting of Boston with LEDs, developed public interventions, websites, critical designs

Awards and Scholarships

- **PEAK Research Award** (Fall 2021-22): undergraduate research grant and presentation of work for Waterway Robot, **Dean's List** (2020-current), **Society of Women Engineers** (2020-current): Volunteer of the Semester and chosen to attend Recognition Banquet, Lockheed Martin **STEM Scholarship**

Extracurriculars and Interests

- Northeastern Women's Rugby Team (2021-current): scrumhalf, painting, design
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