

Jessica Healey



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

Education

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| Northeastern University — <i>Boston, MA</i> | May 2024 |
| Candidate for BS in Mechanical Engineering Experience Design Minor Honors Program GPA: 3.97 | |
| John Jay High School — <i>Hopewell Junction, NY</i> | Class of 2020 |
| Valedictorian / 522 Students | |
| ▪ National Merit Finalist, STEM Program Naval War College, July 2018: Marine engineering program | |

Work Experience

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| PARSES Laboratory — <i>Northeastern University</i> | July 2023—May 2024 |
| ▪ 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 — <i>Westborough, MA</i> | 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 — <i>Boston, MA</i> | 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

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| Project Origami — <i>PARSES Laboratory Northeastern University</i> | July 2023—May 2024 |
| ▪ Hanson, Nathaniel*; Mensah, Immanuel*; Roberts, Sonia*; Healey, Jessica ; Wu, Celine; Furline, Donelle; Dorsey, Kristen. Controlling the Fold: Proprioceptive Feedback in a Soft Origami Robot . Accepted to RoboSoft 2024. | |
| Hydrilla Hunter (Capstone Project) — <i>Northeastern University</i> | May—Dec 2023 |
| ▪ Proposed idea of a surface vehicle to identify and track an invasive aquatic plant and built a team | |
| ▪ Collaboration with the Connecticut Agricultural Experiment Station to improve manual data collection | |
| ▪ Designed, validated, and manufactured a custom multihull marine device for a hyperspectral camera | |
| ▪ Formulated a control scheme for thrusters, ensuring proper material cooling, and integrating with an EECE team | |
| Waterway Robot — <i>Independent</i> | 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) — <i>Northeastern University</i> | Sept 2022—May 2024 |
| ▪ '24 Project: led a team of 13 engineers to build a prototype of an automated underwater kelp-growing system | |
| ▪ '22,'23 Hardware Engineer: tripled a date-cutting machine's cut rate and created deployable solar panel array for boats | |
| Forge (Product Development Organization) — <i>Northeastern University</i> | Feb 2021—May 2022 |
| ▪ '21,'22 Outreach Director: established, hired, and managed the marketing and branding team | |
| ▪ '21 Member: ideated and constructed a mask sanitation product proof of concept | |
| NU Science Magazine — <i>Northeastern University</i> | Sept 2020—2022 |
| ▪ Researched, designed, and published 250 to 750-word articles on marine engineering, forensics, and materials science | |
| Experience Design Projects — <i>Independent and Northeastern University</i> | July—Aug 2021 |
| ▪ Designed, wired, and coded painting of Boston with LEDs, developed public interventions, websites, critical designs | |

Awards and Scholarships

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| ▪ College of Engineering Co-op Award ('24): Exemplary growth in NU co-op program, PEAK Research Award ('21-'22): Undergraduate research grant and presentation of work, Dean's List ('20-'24), Society of Women Engineers ('20-'24): Volunteer of the Semester and chosen to attend Recognition Banquet, Lockheed Martin STEM Scholarship ('20-'24) | |
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Extracurriculars and Interests

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| ▪ Northeastern Women's Rugby Team ('21-'24): scrumhalf, painting, design |
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