

Richard Gregory Rosa

12 Roseland Street, Dorchester, MA 02124

617-883-9177 | rosa.ri@northeastern.edu | www.linkedin.com/in/rosa-richard | <https://rosari.myportfolio.com/about-me>

Education

Northeastern University, Boston, MA

Candidate for Bachelor of Science in Mechanical Engineering and Design

December 2025

Courses: Dynamics, Mechanics of Materials, Thermodynamics, Cornerstone of Engineering, Form and Structure, Statics, Intro to Material Science

Activities: American Society of Mechanical Engineers

Skills

Applications: SolidWorks | AutoCAD | Rhino | Cura | Microsoft Office 365 | Adobe Illustrator and Dreamweaver

Certificates: eCornell Python Programming | MarkForged Certified Additive Expert: Composites and Metals | CSWA

Programming: Python | Arduino | GitHub | MATLAB | HTML | CSS

Machines and Tools: 3D Printer | Laser cutter | Lathe | Mill | Band Saw | Cold Saw | Disc Sander | Soldering Gun | Crimper

Work Experience

Nuvera Fuel Cells, LLC Billerica, MA

July 2023 — January 2024

Manufacturing Engineer — Co-Op

- Led design and implementation of robot tooling and fixtures as Head of Robot Fixture Design which optimized material sorting, simplified robot calibration, and enhanced ease of use
- Applied testing and analysis procedures to locate equipment failure; used temporary modifications to confirm analysis
- Wired calibration panel using precision tools such as crimp tools and soldering gun; tested panel to validate its functionality
- Precision-machined and fabricated components for fixture applications utilizing milling and lathe machinery
- Recorded procedures, machinery, and fixtures utilizing Aras Innovator for comprehensive documentation
- Employed pandas library to adeptly organize and analyze large data files

Target Corporation Dorchester, MA

August 2020 — July 2023

Small Format Team Member — Receiver

- Recipient of Employee of the Month award recognizing outstanding dedication, exceptional performance, and contribution to team success

Projects

Northeastern University Boston, MA

February 2023 — March 2023

3D Printed Headphone Stand

- Designed a practical object using Solidworks that adhered to a 6-hour print time constraint
- Employed brainstorming techniques, sketches, and peer reviews before finalizing the design
- Modified G-Code and prepared 3D printer to overcome challenges that arose from equipment and design

Northeastern University Boston, MA

January 2022 — April 2022

Hot Wheels and Physics — An Interactive Learning Product

- Programmed Arduino for implementation of button controls, LED display, and ultrasonic sensors to track vehicle positions, while also managing reset functionality of race lights and variables
- Utilized CAD software for precision laser cutting of wooden components to construct ramps and racetrack's base
- Collaborated with a team of 4; developed an interactive educational product for children focusing on conservation of energy
- Collected and analyzed data on the product's teaching efficacy and entertainment value; presented the findings in a professional technical report

eCornell Python Programming Certificate

December 2021 — May 2022

Picture Modifier

- Developed software capable of altering images by adjusting hue and color scale; stored picture elements into 2D table of RGB objects
- Provided functionalities to rotate and mirror images

Quasar

- Utilized Python's random and eCornell's introcs libraries to program a text-based replica of Quasar from *Mass Effect*