

HENRY BURON

✉ henryburon2024@u.northwestern.edu

in [linkedin.com/in/henryburon](https://www.linkedin.com/in/henryburon)

github.com/henryburon

Education

Northwestern University

Master of Science in Robotics (MSR)

Sep. 2023 – Dec. 2024 (Expected)

Evanston, IL

William & Mary

Bachelor of Science in Physics

Sep. 2019 – May 2023

Williamsburg, VA

Relevant Coursework

- Embedded Systems in Robotics, SLAM for Robotics, Machine Learning, Robotic Manipulation, Theory of Machines–Dynamics, Intro to Mechatronics, Classical Mechanics, Ordinary Differential Equations, Linear Algebra

Projects

7-DoF Franka Robot Arm Writes Translated Text | *ROS2, Python*

Fall 2023

- Programmed a Franka Emilia robot arm using ROS2 and Python
- Implemented Selenium to create an instance of Chrome in order to interact with the correct elements of the web page.
- Developed a Python API for the ROS2 MoveIt package to control the robot's movement.

Multi-Classification Machine Learning Emotion Detection Model | *Python, Image Processing*

Fall 2023

- Programmed a Perceptron Machine Learning Algorithm that detects classifies faces based on emotion.
- Extracted histogram of oriented gradient from images for feature detection.

Robot Pen Thief | *OpenCV, Python*

Fall 2023

- Programmed a PincherX 100 robot arm to autonomously grab a pen.
- Implemented color and depth detection with OpenCV to create a contour of the pen.

Autonomous Electric Boat | *ArduPilot, Circuits*

Sep. 2022 - May 2023

- Designed and built a fully autonomous, electric boat that placed 3rd in the unmanned class of the Promoting Electric Propulsion for Small Craft competition.
- Lead autonomous navigation...
- Designed electrical

Experience

Baltimore Aircoil Company

Mechanical Design Engineer Intern

May 2022 – August 2022

Jessup, MD

- In progress.

William & Mary Makerspace

Senior Makerspace Student Engineer

Sep. 2021 – May 2023

Williamsburg, VA

- In progress.

Skills

Software: Python, C++, Linux, Git/GitHub, Unit Testing

Robotics: ROS/ROS2, SLAM, Machine Learning, MoveIt, Gazebo, Computer Vision, CoppeliaSim, ArduPilot

Manufacturing/Hardware: Raspberry Pi, Arduino, Circuit Design, CAD, FEA, CNC