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Education

PURDUE UNIVERSITY WEST LAFAYETTE

MAY 2022

· Bachelor of Science, Mechanical Engineering

GPA: 3.3

Engineering Experience

ASSOCIATE ROBOTICS ENGINEER | NAVAL NUCLEAR LABORATORY | WEST MIFFLIN, PA

NOVEMBER 2022 - JULY 2023

- Created a simulation of a UR Cobot robotic arm using C++, ROS, RVIZ, Gazebo, and Docker to support a confidential program
- Implemented software such as Ubuntu, Docker, and ROS to modernize laboratory robotics software
- Developed with Azure virtual machines to work on open source projects while in a confidential environment
- Controlled UR Cobot via .NET and the Under Automation library to increase development speed

Co-Op | HONEYWELL AEROSPACE | SOUTH BEND, IN

AUGUST 2019 - MAY 2021

- Programmed a python script to calculate moments of valve arms using the vision library OpenCV
 - Redesigned valves in NX to reduce wear from friction for RS-25 Rocket
 - Created auto generating plots from excel data with python to study faulty engines
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Projects

SENIOR DESIGN – SELF ADJUSTING MONITOR - [GITHUB.COM/HALL488/LOCKEDIN](https://github.com/Hall488/LOCKEDIN)

- Engineered a monitor mount that autonomously adjusted height and rotation via facial recognition
- Applied TensorFlow and the Coral AI board to integrate facial recognition models
- Utilized controls and systems theory to maintain accurate and steady motor adjustments

PERSONAL – BLOG WORLD - [GITHUB.COM/HALL488/BLOG-WORLD-API](https://github.com/Hall488/BLOG-WORLD-API), [GITHUB.COM/HALL488/BLOG-WORLD-REACT-APP](https://github.com/Hall488/BLOG-WORLD-REACT-APP)

- Developed back end API with CRUD operations for articles, user, comments, and categories
- Designed front end React App to pull data from the API and present a friendly user interface
- Utilized Mongoose to apply CRUD operations on documents stored with MongoDB
- Managed Digital Ocean server using Nginx and Lets Encrypt to provide safe user experience

PERSONAL – HACKERZ - [GITHUB.COM/HALL488/HACKERZ](https://github.com/Hall488/HACKERZ)

- Programmed a real time user based messaging app utilizing Socket.io and Express
- Leveraged webpack to serve efficient bundled static files to users from the Express server
- Identified logged in users with JsonWebTokens to hide information only meant for active users

PERSONAL – SHOP MTG - [GITHUB.COM/HALL488/SHOP-MTG](https://github.com/Hall488/SHOP-MTG)

- Implemented a React App to create a simulated shopping experience for Magic The Gathering cards
 - Simplified workflow by using Vite for hot reloading to improve rate of coding and debugging
 - Shaped readable code base via Prettier.js and ESLint to keep code consistent and maintainable
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Technical Skills

- Languages: Javascript, HTML5, CSS, C#, Python, (learning Rust)
 - Framework and Libraries: NodeJS, React, Express, Socket.io, WebpackDatabase: MongoDB, SQL
 - Other Tools: Git, Github, Linux, Docker, Azure VM, Nginx, Lets Encrypt, Digital Ocean
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Goal

To bring creative visions to life while working in an environment that promotes outside the box thinking