Joseph Marcinowski

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Professional Summary

I am a passionate and curious computer science student at Bridgewater State University. My goal is to develop meaningful healthcare software.

Programming projects: jmarcinowski.github.io

Experiences

Wang Research Laboratory - Massachusetts General Hospital
Data Analyst Intern | 08/2022 - 08/2022

- Worked as a data analyst intern at the Wang lab, which researches ovarian cancer.
- Worked on single-cell human genome sequencing and mapping.
- Developed a script for the researchers to automate repetitive tasks and run asynchronous batches of single-cell sequencing.

Hackathon: Space City Hacks
1st Place | 06/2022 - 06/2022

- 1st Overall Winner of 173 participants or 28 teams.
- Constructed a mobile application to notify truck drivers they were falling asleep using React Native, leading to an audible beeping noise when drowsiness was detected.
- Constructed an API to send heart rate information using Flask running on a Raspberry Pi leading to a successful connection with the mobile application.
- Detected heart rate information using an Arduino and bridged the connection to the Raspberry Pi using jumper wires, leading to a working interface between the sensor and the web API.

VEX Robotics Team 2602B
Lead Programmer | 05/2022 - 05/2023

- Double qualified for VEX Worlds 2023 in Dallas Texas and was awarded with the Google Community Award.
- Won the Design Award from the Southern New England Regional Championship, the region that has 169 teams.
- Accomplished a perfectly tuned PID turn using a C++ genetic algorithm which led to high competition scores.
- Found a plausible shortest path between VEX robotics field elements using Hamiltonian paths and genetic algorithms contributing to winning the Think Award in a 52-team competition in Ridgefield CT.
- Accomplished robotic path following using the Pure Pursuit algorithm in C++ leading to semi-autonomous navigation, high competition scores, and contributed to winning awards.

VEX Robotics Team 2602H
Lead Programmer | 05/2021 - 05/2022

- Won 4 Excellence Awards, the Southern New England Innovate Award, and 2 Design Awards which allowed us to attend the world robotics championship in Dallas where we won the Google Community Award and VEX Worlds Innovate Award.
- Accomplished swift, accurate, robotic turns using PID in C++ leading to high scores.

Hackathon: Tech Optimum Hacks 2022
Honorary Mention | 06/2022 - 06/2022

- Honorary Mention - 313 participants or 49 teams.
- Detected the volume of trash in a trashcan using an ultrasonic sensor connected to an ESP32, leading to an estimate of the total volume of trash.
- Built a web application using Flask and SQLite, which displayed a leaderboard to the user about how well they were managing waste as opposed to other households.

Education

Bridgewater State University | Bridgewater, MA
Computer Science | 06/2027
Received Crimson Merit Scholarship, accepted into the Honors Program