

Ibrahim Musaddequr Rahman

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EDUCATION

University of Michigan

Ann Arbor, MI

BSE Computer Science

May 2025

GPA: 3.98/ 4.00

Coursework: Data Structures & Algorithms, Discrete Math, Linear Algebra, Introduction to Probability & Statistics, Introduction to Computer Organization, Foundations of Computer Science

SKILLS

Programming Languages: C++, Python, Java, JavaScript, TypeScript, HTML/CSS, LabView

Frameworks & Interfaces: ROS, Gazebo, Bootstrap, Firebase, JQuery, React

Operating Systems: Windows, MacOS, Ubuntu, Fedora

WORK EXPERIENCE

University of Michigan

Ann Arbor, MI

Resident Advisor, SubFree Theme Community

August 2022 – Present

- Foster relationship development among 42 Freshman and Sophomore residents
- Maintain a safe space for residents who wish to live Substance Free with dedicated programming

National Science Foundation

Morgantown, WV

REU Student Researcher

May 2022 – July 2022

- Developed multi-step machine learning pipeline to imitate swarm behavior using simple local agent controllers
- Applied genetic algorithms, linear regression, and non-linear optimization to mimic fish school
- Built interface to run learned controllers on physical robot swarms
- Created software suite to make swarm simulations more accessible across research team

West Virginia University Interactive Robotics Lab

Morgantown, WV

Undergraduate Researcher

May 2020 – October 2021

- Developed ROS + Gazebo Simulations to model Robot-Based Pollination
- Wrote Kinematics and Wheel Control Code for Fast Traverse Robot

PROJECT EXPERIENCE

Fastr Food, MHACKS-14 Hackathon Submission

Ann Arbor, MI

Backend Developer

October 2021

- Designed web app to crowdsource Dining Hall Wait Times across 4 locations
- Interfaced with a Firebase and Google Maps to factor in Commute Times + Line Lengths
- Collaborated on a cross-university team to win Best Beginner Hack / 28 and 2nd Best Google Cloud Hack / 60

Marvin 13, FRC Robot

Morgantown, WV

Lead Programmer

January 2020-April 2021

- Implemented control algorithms to allow a turreted shooter to make shots while moving
- Tuned autonomous routine to obtain and score 6 balls in 9s while driving

LEADERSHIP EXPERIENCE

FIRST Robotics Competition (FRC) Team 2614

Morgantown, WV

Lead Programmer, Lead Strategist, Secretary

2016 – 2021

- Led 10-person Programming Subteam to develop control algorithms and win Autonomous Award
- Represented team in Strategic Discussions with competitors and partners to win 4 Regional Events
- Coordinated personnel allocation of 40-person team throughout 4 locations during competition

Boy Scouts Troop 49

Morgantown, WV

Eagle Scout Project

September 2019 – August 2020