Michelle Bryson

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Education

Carnegie Mellon University *Pittsburgh, PA*
BS Electrical and Computer Engineering, Minor in Robotics *Expected May 2024*
- **Relevant Coursework:** Fundamentals of Programming and CS, Introduction to Electrical and Computer Engineering
- **Activities:** Robotics Club, ScottyLabs, College of Engineering First-Year Advisory Board, Society of Women Engineers

Professional Experience

Astrobotic *Pittsburgh, PA*
Software Engineering Intern *Aug 2020 - Present*
- Develop software for CubeRover, a product line of lunar rovers that transport payloads on the Moon's surface
- Program the I2C communication library for CubeRover's solar circuit using embedded C++

Google *Remote*
Computer Science Summer Institute Student *Jul 2020*
- Configured 15 individual and collaborative coding projects using HTML/CSS, JavaScript, and Node.js
- Devise an interactive 3D simulation of the solar system, integrating physics equations to program an accurate model
- Delivered a collaborative project presentation that included a live demonstration to Google Software Engineers

Code Ninjas *Princeton, NJ*
Programming Instructor *Oct 2019 - Jul 2020*
- Introduced over 100 students to computer science through game development in JavaScript and robotics in Arduino

Volunteer Experience

UNICEF *Remote*
App Developer *Sep 2020 - Present*
- Create an augmentative and alternative communication mobile app, developed with Flutter and Speech Synthesis API, that helps users with speech and language impairments communicate with symbols and text-to-speech

Students for Black Lives *Remote*
Full Stack Developer & Java Tutor *Jun 2020 - Aug 2020*
- Tutored students in Java in exchange for donations to BLM organizations, helping to collectively raise over $22,000
- Developed website in HTML/CSS and JavaScript, using Google Sheets API to track and display a donations live

Activities & Leadership

ScottyLabs *Pittsburgh, PA*
Tech Committee Member *Sep 2020 - Present*
- Overhaul the registration and application website for TartanHacks, Pittsburgh's largest hackathon
- Mentor participants in the HTML/CSS workshop at Web Dev Weekend, attended by 200+ CMU students annually

PHS Odyssey of the Mind *Princeton, NJ*
President *Sep 2016 - Jun 2020*
- Improved club member retention rate from 75% to 86% and raised 60% more funds than previous years' average
- Designed and constructed vehicles using recycled materials, and received the Ranatra Fusca Award at World Finals 2018, awarded to 4 of 800+ teams, for outstanding creativity of the vehicle's gear propulsion mechanism

RoboCup Junior *New York, NY & Montreal, CA*
Team Captain *Sep 2017 - Jun 2018*
- Built autonomous Arduino and Raspberry Pi robots and programmed facial detection, obstacle avoidance, line tracing, object retrieval, and serial communication with C, Python, and OpenCV, earning 1st Place at USA nationals

Projects

BayHax *2nd Place, MLH NotUniversity Hacks*
Front End Developer *Jun 2020*
- Created a mental health tracking teddy bear with a Raspberry Pi and buttons that represent different emotions
- Built a website, using HTML/CSS, JavaScript, Python, and MongoDB, that data is sent to and visualized

AID PACT *NASA Space Apps COVID-19 Challenge*
Front End Developer *May 2020*
- Developed a website with an interactive map that visualizes current and AI-predicted COVID-19 cases per country
- Trained machine learning model on 13 space agency datasets and utilized Python, HTML/CSS, and JavaScript

Skills

Programming Languages	Java, Python, C++, JavaScript, HTML/CSS
Tools and Technologies	Git, React, MongoDB, Node.js, Autodesk Inventor, AutoCAD, SolidWorks