# BRIANNA MCDONALD

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## Education

**Memorial University of Newfoundland** September 2018 - April 2023
Bachelor of Science (Honours) in Computer Science St. John's, NL
GPA: 4.0

## Experience

**Embedded Software Developer – Mysa** May 2022 - August 2022
- Software development using C, JavaScript, and AWS for smart, connected home thermostats.
- Migrated software workflows from Circle CI to GitHub Actions and created workflows for automated testing.

**Programmer – Compusult Limited** May 2021 - April 2022
- Developed the award-winning MVP for the Parkinson's Remote Interactive Monitoring System (PRIMS) in a team of 2, which has helped a MedTech startup raise $200,000+ in funding.
- Worked extensively with depth-sensing cameras and hand, face, and body-tracking software.
- Software and web development using Reactjs, Nodejs, Python, Java, AWS, and SQLite.

**Web Developer – NL Eats** June 2020 - January 2021
- Implemented the front-end of an inventory management website using Reactjs with a team of 10+ members.

**Tutor – MUN Computer Science Help Centre** February 2020 - April 2020
- Tutored other students in areas such as programming, algorithms and data structures, and other Computer Science fundamentals.

**Graphic Designer – Ready for STEM** September 2019 - December 2019
- Edited photos using GIMP and created designs for newsletters and event posters.

## Technical Skills

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| **Languages & Frameworks** | Python \| JavaScript \| C++ \| C# \| C \| Java \| React \| Redux \| Nodejs \| HTML/CSS |
| **Libraries** | Numpy \| Matplotlib \| Pandas \| OpenCV \| Scikit-learn \| Mediapipe \| RealSense |
| **Other** | Git \| Jira \| Figma \| Unity \| MongoDB \| SQLite \| Jupyter Notebook \| AWS \| Bash |

## Honors & Awards

**Science Co-op Student of the Year Award – MUN** 2022

**Best Talk in the "Innovation, Technology, and Exploration" Category (Undergrad) – Scientific Endeavours in Academia Research Conference** 2022

**Dean of Science Book Prize for Computer Science – MUN** 2020-2021
Awarded to one student in the department of Computer Science per year on the basis of demonstrated academic excellence in the field.

**2nd Place in Hack Frost NL Hackathon** 2021

**Dean's List – MUN** 2019-2020 & 2018-2019

## Dissertations

**Using Image-Based Tracking for Smartphone-Based Interaction in VR** 2022
Implemented a technique that allows the user to interact with objects within virtual reality (VR) using touch screen and tilt controls on their smartphone, along with two demo applications (PDF).

## Projects

**Portfolio Website (Link)** 2020-2022
My personal portfolio website made using Reactjs and Material UI. Showcases the projects listed here as well as the full list of my other projects that further display my skills.

**Parkinson's Remote Interactive Monitoring System (PRIMS) (Link)** 2021-2022
A system that patients can use at home to monitor Parkinson's symptoms. The software includes custom algorithms that automatically rate the severity of symptoms present during motor exercises performed in front of depth-sensing cameras. Developed the fully functional MVP in a team of 2 using JavaFX, SQLite, and Python.

**Generative Design in Minecraft Competition Entry (Link)** 2021
Developed an algorithm using Python that builds a procedurally generated village in Minecraft by placing houses in found flat areas of the given terrain and creating walkable paths between them.