BRIANNA MCDONALD

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EDUCATION

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

EXPERIENCE

Software Developer May 2023 – Present
Virtual Marine *Paradise, NL*
- Designed and developed a decision support system using Python and PostgreSQL that integrates data from marine training simulators and weather forecasts to provide data-driven insights and advanced data visualizations.
- Built a plug-and-play C++ library allowing seamless use of any off-the-shelf USB controller with training software.
- Engaged in research and development initiatives to expand and enhance the capabilities of marine simulators.

Embedded Software Developer May 2022 – Aug. 2022
Mysa *St. John's, NL*
- Optimized storage by creating a zlib-based data compression library in C to be used in smart thermostat firmware.
- Scripted automated tests using AWS CLI and migrated software testing workflows from Circle CI to GitHub Actions.

Software Developer May 2021 – April 2022
Compusult Ltd. *Mount Pearl, NL*
- Developed the award-winning MVP for the Parkinson's Remote Interactive Monitoring System (PRIMS) in a team of 2, which helped a medical technology startup raise $200,000+ in funding.
- Worked extensively with depth-sensing cameras and hand, face, and body-tracking software.
- Contributed to the development of a climate emergency response system operated by the Canadian federal government that uses React, Node.js, and AWS to provide geospatial data on natural disasters in real time.

Web Developer June 2020 – Jan. 2021
NL Eats *St. John's, NL*
- Implemented the front-end of an inventory management website using React with a team of 10+ members.
- Performed code reviews, testing, and debugging of colleagues' code to improve code quality and reliability.

PROJECTS

Portfolio Website | *Link*
- 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*
- A system that patients can use at home to monitor Parkinson's disease symptoms, utilizing custom algorithms that automatically rate the severity of symptoms present during exercises performed in front of depth-sensing cameras.
- Developed the fully functional MVP in a team of 2 using JavaFX, SQLite, and Python.

SmartVR Pointer: Using Image-Based Tracking for Smartphone-Based Interaction in VR | *Link*
- 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, using Unity and C#.

TECHNICAL SKILLS

Languages:	Python, JavaScript, C++, C#, C, Java, SQL, HTML/CSS, Bash
Frameworks:	React, Node.js, Redux, Django, Material-UI, Bootstrap, Tailwind
Libraries:	Pandas, NumPy, Matplotlib, TensorFlow, PyTorch, Scikit-learn, OpenCV
Other Tools:	Git, AWS, Unity, Jupyter, Figma, PostgreSQL, MongoDB, SQLite, Vagrant

HONOURS & AWARDS

Science Co-op Student of the Year Award *– Memorial University of Newfoundland*	*2022*
Best Talk in the "Innovation, Technology, and Exploration" Category (Undergrad) *– SEA Conference*	*2022*
Dean of Science Book Prize for Computer Science *– Memorial University of Newfoundland*	*2021*
2nd Place Winner *– Hack Frost NL Hackathon*	*2021*
Dean's List *– Memorial University of Newfoundland*	*2023 & 2020 & 2019*