# JAYDEN METCALFE

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## EDUCATION:

**Bachelor of Arts and Science, Cognitive Science** August 2020 - April 2024

*McGill University, Montréal QC, Canada*

- Neuroscience stream, Minor in Computer Science
- J.W. McConnell Entrance Scholarship
- Varsity Ski Team, McGill Women in Computer Science, McGill Women in Tech, Ski Club, Soccer and Dodgeball Intramurals

Relevant Coursework: Algorithms & Data Structures, Python, Java and OOP, Probability, Software Systems, Computational Linguistics, Discrete Structures, Applied Machine Learning, Natural Language to Data Science, Linear Algebra, Deductive Logic

## TECHNICAL SKILLS:

**Languages:** Python, Java, C, Bash (Linux), HTML, CSS, JavaScript, TypeScript, Clojure

**Frameworks & Tools:** Git, Node.js, Angular, React, PostgreSQL, Arduino, Docker, Kubernetes, Keras/TensorFlow, scikit-learn

## WORK EXPERIENCE:

**U16 Alpine Ski Racing Coach & Data Analyst** November 2024 - present

*Whistler Mountain Ski Club, Whistler BC*

- Collaborating with a team of 4 coaches to improve the technical and tactical alpine ski racing skills of 35 athletes
- Delivering instruction on mental and physical conditioning, and other essential attributes required to develop elite athletes
- Ensuring a high standard of safety, while implementing best practices for injury prevention and risk management during training sessions
- Developing Python programs to analyze athlete training data and compare performances across individuals, within the team, and across certain subcategories to optimize success

**Reinforcement Learning Researcher** August 2023 - May 2024

*The Britt Lab, Montréal QC*

- Research project studying how the dorsomedial striatum plays a role in flexible decision-making within mice
- Developed Python and Excel programs to analyze and represent data from daily tasks using graphs and Q-learning models
- Updated Arduino code for each stage of the experiment

**Product Research, Design, and Development Intern** May - August 2023

*Interac Corp., Toronto ON*

- Identified a gap in the market then developed and integrated an API as a solution which was demoed to the upper management
- Collaborated with UI/UX designers to implement new product designs using HTML, CSS, TypeScript and Angular
- Upgraded and added features into an MVC architecture for tools used to present new products to major financial institutions

## PERSONAL PROJECTS:

**FIS Race Points Calculator**

- Developed a tool that allows racers to calculate their scores instantly, reducing wait times from hours to seconds
- Used Node.js with Express to handle API requests and retrieve data from a third party live timing website
- Interpreted and calculated raw data using a Python backend by spawning a subprocess from Node.js
- Displayed results through a dynamic front-end built with HTML, CSS and JavaScript

**Spot It**

- JavaScript and Node.js are used to create a player vs computer version of the popular card game

## EXTRACURRICULARS:

**McGill Varsity Alpine Ski Team** September 2020 - May 2023

- Team Captain and Varsity Council Team Representative
- Balanced a full university course load while training and competing five days a week

**TEAM Mentor** January 2022 - April 2022

- Received the Tomlinson Engagement Award for Mentoring for PHYS102: Electromagnetism & Optics
- Led a group of 15 students in weekly tutorials