

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, Soccer and Dodgeball Intramurals

Relevant Coursework: Algorithms & Data Structures, Python, Java & 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, Express.js, Angular, React, PostgreSQL, Arduino, Docker, Kubernetes, Keras/TensorFlow

WORK EXPERIENCE:

U16 Alpine Ski Racing Coach & Software Developer

November 2024 - present

Whistler Mountain Ski Club, Whistler BC

- Collaborating with a team of 5 coaches to improve the technical and tactical alpine ski racing skills of 40+ athletes
- Developing a full-stack web application with secure OAuth authentication using React, PostgreSQL, Node.js, Express, TypeScript and Python, allowing coaches to log and analyze training data with filters and comparative metrics, and athletes to view personalized performance insights
- Delivering instruction on mental and physical conditioning while implementing best practices for injury prevention and risk management during training sessions

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 in 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 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

- Built a player vs computer version of the popular card game using JavaScript and Node.js

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