

CAMERON JEFFERY

Montréal, QC | Calgary, AB

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EDUCATION

McGill University

B.Sc., Physics w/ Mathematics Minor; GPA: 3.84/4.00

Montréal, QC

Sep. 2021 – Present

PROFESSIONAL EXPERIENCE

McGill University

Undergraduate Research Assistant

Montréal, QC

March. 2024 – Present

- Assisted in a project related to the development of a commercialized device that utilizes microwave based imaging in detecting bladder state and fullness.
- Ran computational simulations via Ansys HFSS and CCDB's computing clusters to optimize antenna design and array arrangement. Used radar-based imaging reconstruction software to visualize signal intensity in computational phantom models.
- Simulations included varying parameter dimensions of patch and Vivaldi antennas, varying the substrate of the antenna, as well as adjusting for anatomical differences.

ATCO Data Engineering

Summer Student Position

Calgary/Edmonton, AB

May 2023-August 2023

- Built and optimized ETL pipelines using Python and Azure Data Factory to integrate and transform high-volume data from ATCO's operational and customer systems.
- Automated data validation and quality checks, improving pipeline reliability and reducing processing time for analytics and Power BI reporting workflows.

ATCO and Picarro

Summer Student Position

Calgary/Edmonton, AB

May. 2022 – Aug 2022

- Worked in the gas division as a part of a team of summer students conducting leak surveys throughout the city of Calgary.
- Helped in collecting and verification of data gathered by the *Picarro Surveyor*, a vehicle equipped with sensitive ethane detectors and an anemometer that can precisely detect surrounding natural gas level in neighbourhoods, identifying sources of gas leaks.

PUBLICATIONS

- Andrew Fry, Cameron Jeffery, Alan Poisot Palacios, Eleonora Razzicchia, Laura Estep, Emily Porter. *Effect of Antenna and Array Positioning on Microwave Bladder State Detection. (Under Review)*, 2025,

EXTRA CURRICULARS

WALKSAFE

Walker and Dispatcher Volunteer

Montréal, QC

Sept 2022 – Present

- An on-campus service that provides volunteers to walk students to wherever they need to be, providing safety and companionship along the way.

McGill TEAM Mentor

Course Assistant

Montréal, QC

Sept 2022 – Dec 2022; Sept 2023 – Dec 2023; Sept 2024-April 2025

- Conducted weekly tutorial sessions for a first year physics course that is designed to help students build strength in the course material and work through practice problems in an interactive way.

PROJECTS

Quantum Pac-Man: 2nd place overall winner at the 2024 McGill Physics Hackathon. A physics twist on the classic arcade game of Pac-Man; coded in JavaScript and HTML. Try out the game [HERE](#)

SELECTED SKILLS

Technical Skills: Experienced in Python, HFSS, R, HTML/CSS, L^AT_EX, Java, MATLAB; basic knowledge in C++, JavaScript