

# 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. 2025-August 2025*

- 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; May 2023 – Aug 2023*

- 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:** 2<sup>nd</sup> 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<sup>A</sup>T<sub>E</sub>X, Java, MATLAB; basic knowledge in JavaScript