

Aakanksha Khandwaha

akhandwaha@mta.ca | aakanksha.ca | +1 (902) 814-2024

Education

Bachelor of Science, Joint Honours in Mathematics and Computer Science 2020-Present
with a minor in Biochemistry

Mount Allison University, Sackville, New Brunswick, Canada

Bumblekite Machine Learning Summer School in Healthcare and the Biosciences July 2023

ETH Zurich, Zurich, Switzerland

International Baccalaureate (IB) Diploma 2017-2020

Cobequid Educational Centre, Truro, Nova Scotia, Canada

Honours and Awards

Marjorie Young Bell Scholarship September 2020 - Present

Value: \$48,000 and \$8,000 for personalized internship

Mount Allison University, Sackville, New Brunswick, Canada

- Awarded to exceptional high school graduates who demonstrate strong academic ability, leadership capability, volunteer work, extracurricular activities, and good citizenship

Dean's List 2020 - Present

Mount Allison University, Sackville, New Brunswick, Canada

Medal of Excellence in Mathematics May 2020

Cobequid Educational Centre, Truro, Nova Scotia, Canada

- Awarded to one Cobequid Educational Centre graduate annually

Lieutenant Governor's Education Medal 2019

Cobequid Educational Centre, Truro, Nova Scotia, Canada

- Awarded to two grade 11 Cobequid Educational Centre students annually

Research Experience

Undergraduate Honours Thesis Student September 2023 - Present

Advisor: Dr. Laurie Ricker

Mount Allison University, Sackville, New Brunswick, Canada

- Developing a machine learning algorithm to detect Internet of Things (IoT) network attacks

Undergraduate Research Intern May - August 2023

Advisor: Dr. Amber Simpson

Queen's University, Kingston, Ontario, Canada

- Co-wrote and developed the Responsible Use of A.I. podcast, interviewed 3 interdisciplinary scholars
- Analyzed biases towards marginalized subgroups (race, gender) in clinician notes via MIMIC database

AI4Good Lab Fellow

May - June 2022

Mila, Montreal, Quebec, Canada

- A seven-week AI and machine learning training program for gender minorities with a focus on applications for social good
- Pitched and developed heAlthics, a project evaluating racial bias in skin condition and cancer detection AI models by analyzing the diversity and generalizability of datasets and proposing solutions to mitigate the bias

Research Student

July - August 2022

Advisor: Dr. Matthew Betti

May - June 2021

Mount Allison University, Sackville, New Brunswick, Canada

- Mathematical modelled and analyzed COVID-19 data using a modified SIR model to predict future infection rates in Canada. Model utilized by Public Health Canada.
- Presented at the Student Undergraduate Research Fair (SURF) Mount Allison outlining the change in effectiveness of non-pharmaceutical interventions (e.g., masking, social distancing) over the course of the coronavirus pandemic
- Modified a mathematical ODE model of honeybee colonies to analyze the threshold for hygienic behaviour for multiple hives.

Teaching Experience

Computer Science Teaching Assistant, Mount Allison

September 2021 - Present

COMP1631, Introduction to Computer Science: Fall '21, Winter '22, Fall '22, Fall '23

COMP1731, Programming Techniques and Algorithms: Winter '23

- Organized, prepared, and lead TA training for all Mt. A computer science TAs during Fall '23
- Helped students during biweekly lectures, supporting in-class activities
- Marked in-person labs and programming assignments, invigilated tests

Math and Computer Science Help Centre TA, Mount Allison

September 2022 - Present

Fall '22, Winter '23

- Ran a weekly help centre for students in first- and second-year math, data science, and computer science courses, helping them with assignments and practice problems

Lab Teaching Assistant, Mount Allison

September-December 2021

MATH1511, Applied Calculus: Fall '21

BIOC1001, Introduction to Biochemistry: Fall '21

- Helped students during weekly labs, marked said labs

Kangaroo Math Contest Activity Lead, Mount Allison

March 2023

- Lead games of "Fox and Goose" and taught 8-16-year-old kids the mathematical 'trick' behind winning the game every time

Girls Coding Outreach Program, Mount Allison

July 2021

- Taught young girls to code using MicroBits and Scratch MIT at the local park.

Teen Tutors Mentorship Program, C.E.C.

September 2018 - March 2020

Leader and Organizer: 2019/20, Volunteer: 2018/19

- Tutored and helped students with their homework at Truro Junior High and Public Library
- Organized tutoring schedule with Junior High School and other tutors to pair with students

Community Involvement

Mount Allison Hacks 2023, President September 2022 - Present

- Lead and organized Mount Allison University's annual computer science conference and hackathon aimed at increasing accessibility to the field for high school and university students across the Maritimes
- Fundraised approx. \$10,000 from local sponsors and New Brunswick technology companies
- Collaborated with Amazon, Google, and IBM employees to organize workshops and judge hackathon projects

Mount Allison Women in Science Club September 2020 - Present

Co-President: 2022/23, 2023/24. Computer Science Representative: 2020/21, 2021/22

- Organized an elementary school outreach program to increase accessibility to STEM
- Organized a science speaker series with Mt. A alumni and professors to help guide current students in their post-graduate pursuits and form meaningful connections

Enactus Mount Allison September 2020 - May 2022

President: 2021/22, Research Assistant: 2020/21

- Lead 3 projects (Enviroot, Textbook Osmosis, Greenlight) which aimed to increase environmental sustainability across the Mount Allison and Sackville community
- Developed environmentally friendly particle boards from orange peels and rice glue as Enviroot project researcher

Mount Allison Programming Club September 2021 - Present

Member, currently ranked 24th on Kattis university leadership board

- Participated in many programming competitions, including the Science Atlantic Canadian programming competition, ICPC NENA Programming Competition, and MAPS

Synced Cooperative (prev. Code Red Co.), Organizer May 2019 - Present

- A co-powering organization promoting period wellness and de-stigmatization through literacy, aid, and advocacy

Rotaract Club of Mount Allison, Executive Member September 2020 - May 2022

Anti-Racism Judicial Panel, Member September 2020 - Present

Divest Mount Allison, Organizer September 2020 - Present

Girl Up Canada, Lead of Socials (External) October 2020 - February 2022

- A youth-led non-profit founded by the United Nations Foundation to advance gender equity and justice through Canadian club chapters.
- Handled official Girl Up Canada social medias and curated posts highlighting notable women, feminist literature, and different social issues pertaining to Canada.

Truro Period Collective (prev. PERIOD @ CEC), President May 2019 - June 2020

- Founded the 1st high school PERIOD Chapter in Atlantic Canada
- Spoke as a panelist at the 1st [Nova Scotia Period Poverty Summit](#) in 2019
- Fundraised \$500 and period products at the Farmer's Market to put products in all bathrooms at CEC and donate to local food bank for menstruators in need

Skills and Certificates

- Spoken Languages: English (fluent), Hindi (fluent), French (intermediate)
- Programming Languages: Python, Java, C, R, HTML
- AMII Kickstart Program 2023