

# TONY XU

Hamilton, ON

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Linkedin Profile

## EDUCATION

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**McMaster University, Hamilton**

*2021 - present*

B.S. in Mathematics & Statistics

Relevant coursework: Mathematical Scientific computation, Probability, Ordinary differential equations, Statistical Inference, Introduction to modelling, Applied linear regression with SAS.

## PROJECTS

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**Python**

September 2022

- Created plots using pyplot.
- Computed matrix operations using  $2 \times 2$  for loop and lists.
- Computed the Reimann sums using functions, for loops and while loops.
- Computed Cayley tables using for loops and functions.
- Computed Buffon's needle to show that Buffon's needle estimates  $\pi$  when the sample size approaches infinity.

**C++**

May 2019

- Programmed a calculator in C++.
- Rock paper and scissors game.
- Computed the fibonacci sequence.

**R**

September 2024

- Used dimensionality reduction techniques such as PCA and FA in exploratory data analysis.
- Used Supervised learning methods such as k-nearest neighbours, classification trees and random forests to explain data
- Used Logistics regression to obtain the odd ratio to interpret data.

**Research Paper**

July 2024 - August 2024

- Third author in Computational Measures of Gaze Behavior Using the Concept of Situational Awareness with instructor: Qing Xu.
- Read various documentations in the field of partial information decomposition to give feedback and corrections.
- Helped typeset the  $\text{\LaTeX}$ document.

## SKILLS

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**Technical skills:** Microsoft Office, SAS, MATLAB, Git

**Computational Languages:** Python, Elementary C++, R, and  $\text{\LaTeX}$

**Linguistic Languages:** Fluent in English and Mandarin.