

# JOHN ZHANG

Waterloo, Ontario · johnzhanguoft@gmail.com · 519-616-4119 · [github.com/john-zhang-uoft/](https://github.com/john-zhang-uoft/)  
[linkedin.com/in/john-z-zhang/](https://www.linkedin.com/in/john-z-zhang/) · [john-zhang-uoft.github.io](https://john-zhang-uoft.github.io)

## SKILLS

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Languages: Python, HTML, CSS, MATLAB, Javascript, C, C++, C#  
Tools: VSCode, Version Control (Git), Github, JetBrains IDEs  
Spoken Languages: English, French, Mandarin

## PROJECTS

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**STEM Fellowship's Big Data Challenge** February 2020  
[stemfellowship.org/2020high-school-big-data-challenge/](https://stemfellowship.org/2020high-school-big-data-challenge/)

- Worked with 2 teammates using **regression** analysis to discover relationships between sea surface temperature and hurricane trends
- Analyzed large CSV and JSON datasets with Python and the pandas library
- **Interpreted data** in the project paper published in the STEM Fellowship Journal and presented the project to a panel of data scientists as national finalists of the Big Data Challenge.

**Personal Website** December 2020 - January 2021

- Built a **responsive personal website** from scratch with HTML5 and styled with native CSS
- In process of implementing vanilla Javascript to assist with loading and animations.

**Sleep Condition Optimizer** January 2021

- Used the TensorFlow library to create a python program that maximizes sleep quality
- Program records users' sleep data and store them in csv files
- Trains a deep **neural network model** with the Keras library by parsing the csv data file

**Connect Four Game** [github.com/john-zhang-uoft/Pygame-Connect-Game](https://github.com/john-zhang-uoft/Pygame-Connect-Game)

- Built a connect four type game with an **Object Oriented Programming** structure
- Used the pygame framework sound and graphics libraries to create the GUI

## WORK EXPERIENCE

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**Parks Canada - Bruce Peninsula National Park** Tobermory, Ontario  
*Visitor Services Associate* July 2019 - August 2019

- Patrolled trails and **enforced adherence** to park rules to protect conservation areas and to maintain visitor safety. Recommended park activities and resolved phone inquiries. Performed campsite cleaning rounds, including collecting trash and leftover fire pit charcoal and ash. Accepted payments and processed camp office transactions.

**City of Kitchener - Breithaupt Center** Kitchener  
*Camp Leader* July 2018 - August 2018

- Worked with other leaders to design and lead fun activities and games for campers between ages of 7 and 9. **Assisted campers struggling** with behavior issues and ensured the participation of all campers.

## EXTRACURRICULAR ACTIVITIES

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**Debate Club Executive and Coach**  
**Communicated** between schools while organizing an inter-school regional debate tournament. Planned and ran debate club meetings for a group of 40 students. **Coached** members in British Parliamentary and Canadian Parliamentary debate. September 2019 - March 2020

**McGill Dev Cup and McMaster High Schools 2020** McGill University Debating Union,  
McMaster University Debate Society  
**Top speaker** and qualified semifinals with partner at the McGill Dev Cup. 9th place overall speaker and 9th place team at McMaster High Schools. Competition of around **160 debaters** at both tournaments. August 2020, February 2020

## EDUCATION

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**University of Toronto** Toronto, Ontario  
Bachelors of Applied Science in Engineering Science Sep 2020 - April 2025