John Zhang

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Skills and Languages

Programming Languages: C#, Python, C, Javascript, HTML, CSS, MATLAB:
Tools: Git (source control), Visual Studio and VSCode, Jetbrains IDEs:
Proficient in: English, French, Mandarin:

Work Experience

Rocscience   Toronto, Ontario
Software Developer Intern   April 2021 - Present

- Designed, created, and presented a cross-platform 3D model viewer with 2 teammate using the Electron framework and Vue.js.
- Developed and streamlined performance of runtime algorithms designed to parse 3D mesh elements for use in machine learning structural convergence predictions.
- Reviewed and improved existing C# code of the RS3 Software.

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.
- Performed campsite cleaning rounds, including collecting trash and leftover fire pit ash.

City of Kitchener - Breithaupt Center   Kitchener, Ontario
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 campers participated and had fun.

Projects and Awards

STEM Fellowship's Undergraduate Big Data Challenge Finalist *May 2021*
https://stemfellowship.org/undergraduate-big-data-challenge-2021/
Worked with 3 teammates using various statistical methods to analysis to analyze twitter communities and evaluate the effects of fake news on COVID-19 related tweets. Used dimension reduction techniques such as PCA and t-SNE as well as machine learning algorithms including neural networks, decision trees, and linear regression on large dataset of tweets. Wrote a scientific paper detailing methods and results, and presenting to judges in July 2021.

STEM Fellowship's High School Big Data Challenge *February 2020*
https://journal.stemfellowship.org/doi/abs/10.17975/sfj-2020-001
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.

Extracurricular Activities

McGill Dev Cup and McMaster High Schools 2020   McGill University Debating Union, McMaster University Debate Society
Top speaker and semifinalist 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.   February 2020, August 2020

Education

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