# Jase Tran

tranndt@myumanitoba.ca
linkedin.com/in/tranndt
(431) 335 4421
she/her

## WORK EXPERIENCE

**Data Science Specialist – Manitoba Hydro**                                    **Jan 2022 – Nov 2022**
**Co-op Work Terms 2 & 3**
- Worked as a main architect in developing a Credit and Recovery customer predictive model in Azure Machine Learning Studio using its Python SDK, in collaboration with Microsoft. As a pilot machine learning project, the project laid the foundation for future corporate projects in this space.
- Main tasks included research, solution design, data gathering and analysis, feature engineering, creating and explaining machine learning models, and documentation. In addition, was also partly responsible for constructing machine learning and data pipelines, and integration of responsible AI principles.
- The resulting ensemble model achieved a macro F1 score of 0.89 and balance accuracy of 0.9 on a large (millions of rows) but highly imbalanced dataset (4 classes)
- In addition, also provided consultancy to business unit leaders on future data collection strategies and practices to obtain types of data that are reliable model input, useful for business value evaluation and directing actions towards mitigating customer credit risk.

**Research Assistant – Undergraduate Summer Research Award**          **May 2021 – Aug 2021**
**Co-op Work Term 1**
Database and Data Mining Laboratory, Dept. of Computer Science, University of Manitoba
*Supervised by Dr. Carson Leung.*
- As a team of three, awarded 1$^{st}$ place in the scheduling challenge presented by Bison Transport during the Nexus Data Challenge 2021. Solution consisted of a novel load balancing scheduling algorithm, and a Long Short-Term Memory (LSTM) Neural Network that can predict the future load.
- Developed a special Neural Network called an auto-encoder using PyTorch that works with health data (COVID-19, breast cancer). The auto-encoder offers improvement to traditional Machine Learning models in terms of F1 score, and using our derived metric.

**Research Assistant – Undergraduate Research Award**                         **May 2020 – Aug 2020**
Department of Computer Science, University of Manitoba
*Supervised by Dr. Mike Domaratzki.*
- Implemented tools and techniques to overcome class-imbalance when predicting a multi-class dataset (credit card activities) and distribution-imbalance when predicting a continuous dataset (corn yield). Overall achieved an average increase of 8% in R2 regression score with the use of imbalanced sampling tools and other Machine Learning models.

## TECHNICAL SKILLS

**Programming Languages**: Python, Java, C/C++, C#, JavaScript, SQL, R, Assembly.
**Libraries**: NumPy, Scikit-learn, Pandas, PyTorch, Matplotlib, Imbalanced-Learn (Python).
**Applications**: Android Studio, Microsoft Visual Studio Code, Jupyter Notebook, Unity Engine.
**Platforms:** Git, Fork, Slack, Deputy, Trello, Microsoft Teams, Microsoft Office, Doodle.

## EDUCATION AND AWARDS

**Bachelor of Computer Science, Honours (Co-op), cGPA: 4.00**　　　　**Sep 2019 - Present**
University of Manitoba

**University Transfer Program II, Computer Science, GPA: 4.40**　　　　**Sep 2018 - Aug 2019**
International College of Manitoba
- **ICM Leadership Excellence Award**　　　　**Feb 2020**
- **ICM Navitas Merit Scholarship**　　　　**Mar 2019**
  *Awarded to two students with the highest GPA each term.*

## GROUP PROJECTS

**Winnipeg Transit On Time Performance Analysis**　　　　**Sep 2021 – Dec 2021**
Introduction to Data Mining (COMP 4710) Term Project
- A machine learning-based analysis of Winnipeg transit on time performance using data of bus arrivals, traffic volume, road geometry, construction sites and lane closures.

**UMHUB (Android)**　　　　**Jan 2021 – Apr 2021**
Software Engineering 1 (COMP 3350) Term Project
- Application that hosts courses and other academic information for university students. Developed using Android Studio.

**Mask Madness (Unity)**　　　　**Jan 2021**
CSSA Game Jam
- 3D game in which the player avoids infectious agents while completing tasks. Developed using the Unity Engine. Hosted on Itch.io.

## VOLUNTEER EXPERIENCE

**Student Manager**　　　　**Sep 2019 – Sep 2020**
International College of Manitoba Student Council
- Planned and organized monthly projects and events like game nights, movie nights, field trips, scavenger hunts, fundraising, and more.
- Hosted weekly meetings and managed the operation of Student Council body and its members.
- Implemented changes to the event's formats to better engage students, which saw an average increase in attendance of 10 per event.

**Orientation Presenter and Volunteer**                                    **Sep 2019**

International College of Manitoba Orientation

- Presented at the Orientation.
- Hosted the Q&A Desk to offer instructions and counselling to new students.

## ADDITIONAL WORK EXPERIENCE

**Language Interpreter**                                         **Jun 2019 – Apr 2021**

Language Line Solutions/ Kelly Services Ltd., Canada

- Offered real-time over the phone interpretation services for English speaking institutions in North America and their non-English speaking customers. The institutions belong to a wide range of industries such as Healthcare, Government, Insurance, Financial, Utilities, and more.
- Displayed excellent customer service and communication skills, and the ability to follow protocols.