# MY DUC TRAN

## EMPLOYMENT

**Okta Inc** — Toronto, ON
Software Engineer Intern (Full Stack) - OIN DAX Team — May 2022 to Aug. 2022
- Developed an end-to-end platform for app catalog editor additions in ISV Portal.
- Implemented a new UI component with Quick Search API.
- Improved the current workflow from one per week update to hourly update.
- Tech: Java, DropWizard, Backbone.js, REST API, My SQL, Agile, Jira, Git

**DRW Holdings, LLC (NDA)** — Montreal, QC
Software Developer Intern — May 2021 to Aug. 2021
- Built NLP model for automated Trading Simulator in New Flow Team (NSA).
- Tech: Tensorflow, Kedro, Docker and Ray

## PROJECTS

**Empirical Assets Pricing via Machine Learning** — Sept. 2021 to Dec. 2021
- Study the relationship between stock index factors and the corresponding premium stock return over time using regression and machine learning models.
- Proved that linear regression with Huber Loss outperformed Neural Network and achieved state-of-the-art test error at around 2%.
- Supervisor: Prof Yi Yang, McGill University

**AI 4 Good Lab** — Apr. 2021 to June 2021
- Used Logistics Regression and SGD Classifier model to predict Autoimmune Disease flare-up in that day based on user data
- Worked on React app to gather user data about food, weather, exercise time, etc...

**MNIST Digit Recognizer** — Dec. 2020
- Built a classic **CNN model** to recognize handwritten digit with an accuracy of **99.7%, top 100 in Kaggle Competition**.
- Created a web demo for the client to predict their handwritten digits or with uploaded images using **Tensorflow and Javascript**.
- demo: mytran2111.github.io/DigitRecognizer_web_demo/

**MAIS 202 - Kaggle Competition 1st place** — Nov. 2020
- Worked on MNIST problem to find the maximum of multiple digits in 2D images.
- Built **CNN model** and work on **Grid Search CV** and **Data Augmentation** to achieve **accuracy of 97.9%**.
- Wrote final proposal to demonstrate the process and the model architecture.
- source code: MNIST_Max-digits

**WEB WHITEBOARD - Code Jam Hackathon 3rd place** — Nov. 2020
- Created a virtual whiteboard to reduce the challenge for students to attend online schooling.
- Built website by **Javascript, HTML, CSS and p5.js** for 2D graphics.
- demo: mytran2111.github.io/Code-Jam-2020/

## CONFERENCE

**Deep Conservative RL for Personalization of Mechanical Ventilation Treatment ·**
**Published at RLDM 2022, winner of University of Toronto Artificial Intelligence Conference 2022**
- Preprocessed MIMIC III dataset of over **50,000 patients** using MySQL and Pandas.
- Implemented LSTM Autoencoder to encode patients' historical data with lab values and demographics.
- Implemented DeepVent, the first Conservative RL model to customize ventilation treatment.
- Awarded winner of Project X organized by UofT with the **highest score among 25 papers** submitted.
- Tech: Pandas, Pytorch, MySQL, AWS, d3rlpy.

## AWARDS

**UofT AI · Winner of Project X Machine Learning Competition - Clinical Practice Cohort** — Feb. 2022
The winning team of Project X - International AI Conference
"Six McGill Undegrads win UofT international artificial intelligence competition" - The McGill Tribune (March 2022)
"Undergrad team uses machine learning to create a better hospital ventilator " - McGill Reporter (March 2022)

**Edward W Beatty Scholarship**
Renewable scholarship for top 10% students in Mathematics, awarded for all semesters (2019-2022)

**Tomlinson Engagement Award for Mentoring** — Aug. 2020
Mentor for Linear Algebra I.

**Net X Technology Case Competition 2021 · Honorable Prize Notos Technologies** — Mar. 2021
Strategized and implemented a NN model that lengthens drone flight times and saves critical battery life based on weather and wind real-time data.

**UK Mathematics Trust · Gold Medal in United Kingdom Senior Mathematical Challenge** — Dec. 2018
Invited to first round for British Mathematics Olympiad

## Leadership

**VP Finance - Competitive Programming at McGill** — Apr. 2021 to Current
- Managing financial expenses and budget as well as sponsor packages for our events.
- Organized Tech Games, the biggest tech challenge in McGill with 100++ signups.
- Worked with sponsors from IMC, CAE, Deloitte,...

## CONTACT


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## EDUCATION

**McGill University** — 2019 to 2023
B.Sc Statistics & Computer Science
CGPA : 3.96/4.0

## SKILLS

**PROGRAMMING LANGUAGES**
Python
Java
Ocaml
R
HTML
JavaScript
CSS
mySQL
C
Hibernate
OpenAPI

**ML/AI**
Pytorch
Tensorflow
Scikit-learn
Pandas
Numpy
Keras
Kedro
Docker

**DEVELOPMENT**
Git
Agile
Jira
Confluence