Eric Yu

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Summary of qualifications

- Programming: Python, SQL, Java, C, JavaScript, Git, HTML/CSS, PHP, Linux, Overleaf, Matlab, R
- Skills: Machine Learning (Scikit-learn, Tensorflow, Keras), Data Analysis & Visualization (Pandas, Numpy, Tableau), Statistical Analysis (Hypothesis testing, Regression analysis), Data Mining, Software Design, Excel
- Result-driven data science student, eager to solve complex business problems with proficient analytics techniques

Education

University of Toronto — **Starting *Sep. 2023***

Master of Science in Applied Computing - Data Science Concentration

McGill University — ***Sep. 2019 - Jan. 2023***

Bachelor of Science - Major in Statistics, Minor in Computer Science | **GPA: 3.97/4.0**

- Dean's Honor List, Science Scholarship, Golden Key Honor, Chess Club, Intramural Basketball

Experience

Siemens, Shanghai, China

Software Engineer Intern (Postgresql, GUI, Java, Python, Linux, Tableau) — ***May. 2021 - Aug. 2021***

- Developed a front-end GUI for recording and managing information of **5,000** employees in Siemens factory
- Coordinated with a cross-functional team to build a back-end interface with Pandas to clean the logistic data
- Assisted developing an Android application using MVC design pattern, used to monitor the efficiency of production line
- Built graphs using Google Charts and Python for visualization of ML algorithm metrics and presented to clients
- Conducted statistical analysis of marketing campaigns, leading to a **13%** increase in conversion rates

Siemens Energy AG, Shanghai, China

Data Analyst Intern (Python, Machine learning, MySQL, IBM DB2) — ***Sep. 2020 - Dec. 2020***

- Designed a Decision Tree model using scikit-learn, result in saving **38%** heat supply for 4 residential buildings
- Conducted A/B testing to evaluate client's heating system, utilizing hypothesis testing and confidence intervals
- Retrieved and cleaned the boiler operation data using SQL, proposed a generalized linear model that predicts the temperature of the reheater, and increased the accuracy by **33%**
- Automated data extraction, processing, and backup by building data pipelines, saving **15 hours** per week

McGill University, Montreal, QC, Canada

Teaching Assistant (Applied Regression, Analysis I, Linear Algebra) — ***Sep. 2021 - Dec. 2022***

- Explained object-oriented programming, Analysis and Regression concepts to students and graded assignments

Research

CAMBAM, Montreal, QC, Canada

Data Lab Assistant (Python, Machine learning) — ***Aug. 2022 - Jan. 2023***

- Developed RNN and CNN using Keras to classify saccade movement, and obtained **94%** accuracy
- Conducted bandpass filtering and normalization on raw data, and visualized ML metrics using Python for presentations
- Interpreted explaining power of features of traveling wave in different ranges using Shap Analysis

McGill Physiology Lab, Montreal, QC, Canada

Research Assistant (HTML/CSS, javascript) — ***May. 2022 - Aug. 2022***

- Developed an interactive web application that used OpenGL shader to simulate cardiac cell model
- Implemented an algorithm that can automatically adjust the angle of the branch of the load track for simulation

Projects

Kaggle Contest - Multi-label Classification of Handwritten Alphabets

- Led a team of 4 in Kaggle competition for classifying image labels, and **placed top 10% baseline**
- Designed a CNN model and trained 30,000 labeled images, reduced the inference time by **40%** building an Autocoder

Machine Learning Reproducibility Challenge

- Reproduced, evaluated results of Contrastive Clustering (CC) algorithm on various datasets
- Applied NLP techniques on unsupervised text-clustering tasks and improved the CC algorithm by **18%**

AI Agent for Colosseum Survival

- Developed an AI agent for a two-player turn strategy game using Monte Carlo Tree Search and CSP algorithm