

Ryan Chen

SOFTWARE ENGINEER · DATA ENGINEER · BSc (MAJOR IN MACHINE INTELLIGENCE)

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Professional Experience

Stratum AI

Toronto, Canada (Remote)

MACHINE LEARNING DEVELOPER

May. 2022 - Sept. 2023

- Development of machine learning model health monitoring tools and spatial-temporal data analysis tools
- Trained machine learning models on mine drill sampling data for ore and waste prediction
- Preparation of presentation materials for product team's showcase to clientele
- Backend code refactoring and codebase health maintenance

EDGE Leadership

Toronto, Canada (Remote)

BACKEND DEVELOPER

Jun. 2021 - Aug. 2021

- Small team and solo MySQL database modeling and development
- Secure handling of private user data and aiding in patching prior data leaks
- Delivery of small scale database prototypes
- Deployed and maintained cloud infrastructure using AWS as DevOps technologies

Education

University of Toronto

Toronto, Canada

BSc ENGINEERING SCIENCE MACHINE INTELLIGENCE

Sep. 2019 - Exp. Mar. 2024

- Currently studying under Faculty of Applied Science and Engineering at University of Toronto
- Relevant course work: "Data Structures and Algorithms", "Artificial Intelligence", "Machine Intelligence, Software, and Neural Nets", "Probabilistic Reasoning", "Matrix Algebra and Optimization"

Skills

Programming Python, C, Java, C++

DevOps / Tools Git, GitHub, NetBeans, AWS

Modelling Software Fusion360, Verilog, KiCAD, LTSpice, Sketchup

Databases MySQL, PostgreSQL, Pandas

Machine Learning Pytorch, TensorFlow, Jax

Relevant Experience

sBERT & GCN Retail Recommendation System

Daisy Intelligence Hackathon

DATA ENGINEER

Mar. 2023

- 3rd place submission
- Retail and customer data pre-processing and post-processing for machine learning pipeline
- Data pipeline design proposal and machine learning model architect

Convict Recidivism Prediction

MLH AI Hacks 4 Good Hackathon

DATA ENGINEER

Oct. 2022

- 1st place submission
- Convict data processing for machine learning pipeline
- Neural Architecture Search and adversarial child neural network feedback loop architect

Reinforcement Learning Model Competitive Turn-based Combat

University of Toronto

MACHINE LEARNING ENGINEER

Apr. - May 2022

- Developing controlled training environment to emulate turn based Pokémon Showdown battles
- Trained Proximal Policy Optimization model against minimax algorithm opponent in Pokémon Showdown
- Implementation of learning opportunity for multi-agent adversarial training

Convolutional Neural Network (CNN) for Malicious Cell Detection

University of Toronto

MACHINE LEARNING ENGINEER

Dec. 2021

- CNN architecture extracts key features from images for binary classification
- Final model exceeded 95% accuracy on test and validation data within 10 epochs of training
- Solution proposed to eHealth Africa in assisting lab technicians in improving efficiency of malaria testing