ROBERT CIBOROWSKI

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Proficiencies

Languages: Python, Java, C++, MySQL, PostgreSQL, Cassandra, JavaScript, C, R, GLSL, HTML, English, Polish
Tools: Git, AWS, React, Flask, JQuery, PyTorch, TensorFlow, Pandas, NumPy, OpenGL, OpenAL, OpenCV, SDL
Practices and Platforms: CI/CD, Unit Testing, Linux, Windows, MacOS, Android

Education

Bachelor's of Computer Science   **2019-2023**
University of Toronto - Finished 3rd year studies
Specializing in Artificial Intelligence, **Minoring** in Statistics, Economics
GPA: 3.79/4.0, **Honors:** Dean's List (6 semesters)
Relevant Courses: Data Structures, Systems Programming, Software Design, Enriched Theory of Computation, Mathematical Reasoning for Computer Science, Calculus I & II, Statistics for Computer Science, Linear Algebra

Work Experience

RBC Capital Markets, AI Engineer – Python, CI/CD, PyTorch, Cassandra, Pandas, Numpy, Kafka   **2021-2022**
- Worked on a Python reinforcement learning algorithm which trades over $100 billion in securities every year.
- Used order data from a Cassandra database to report performance metrics (slippage, spread cost, mean reward)
- Turned the trading algorithm into a Python API which partially runs in C using Cython.
- Wrote unit tests and worked in a CI/CD pipeline to release stable versions of software.
- Improved trading performance by creating a new rewards system for the RL model to learn from.

Rules Cube, Machine Learning Engineer – React, Node.js, AWS, TensorFlow, Python, Pandas, Numpy   **2020**
- Built a machine learning API using AWS services such as EC2, ECS, SQS, DynamoDB, Amplify and CodePipeline.
- Wrote an image annotation tool using React, Javascript and Auth0.
- Led a team of 10 annotators to double a dataset's size to 10,000 images.
- Redesigned a natural language processing model for improved inference speed and 4% higher accuracy.
- Wrote technical design documents for current and future employees explaining how the API works.

Product Specialist, Apple Sherway Gardens   **2019-2020**
- Used broad knowledge of products to provide solutions to customers alongside teammates.

Notable Projects

Dermabox – Javascript, CSS, Python, TensorFlow   **2020**
- Used TensorFlow and OpenCV in Python to create a machine learning model which detect Acne Vulgaris and Atopic Eczema using images of patients' skin. Was a top 5 project at the hackathon.
- Created the front-end using Javascript and CSS.

Neo-Zero – C++, OpenGL, Python   **2016-2020**
- Created this Kickstarter funded, C++ and Python based 3D game with the help of Git.
- Project obtained over $1,800 CAD in funding and is now on sale on the Steam platform.
- Created the multithreaded and open-sourced 3D engine, "Project Aela", using C++, OpenGL, Git, OpenAL, SDL, FreeType and Zlib. Created a 3D and 2D renderer, compressed audio loader & player, animation system, event framework, menu system and resource manager.

Cryptocurrency Price Distribution Prediction Using Neural Networks – Python, TensorFlow   **2021**
- For a final course project, wrote a research paper which evaluates several deep-learning model architectures and technical indicators to predict the next-day price distribution characteristics of cryptocurrencies.

The Iron Bears Robotics – Java   **2016-2018**
- Worked on a FIRST Robotics Competition robot's sensor communication, motor driving, human control, camera stream and a proportional-integral-derivative automation system in the Java programming language using Git.