

ROBERT CIBOROWSKI

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Proficiencies

Languages: Python, C++, Java, Rust, MySQL, PostgreSQL, Cassandra, JavaScript, C, R, GLSL, HTML, English, Polish

Tools: Git, AWS, React, Angular, Kafka, Flask, PyTorch, TensorFlow, Pandas, NumPy, OpenGL, OpenAL, OpenCV

Practices and Platforms: CI/CD, Unit Testing, Linux, Windows, MacOS, Android

Education

Bachelor's of Computer Science

Graduating in May 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

Meta, Software Engineer Intern - React, PHP, SQL, LLVM, Clang, C++, Objective-C

May – July 2022

- Constructed the front & back-ends of development tools for Facebook's repositories.
- Used LLVM and Clang to write code optimization tools that are interacted with using a React UI.

RBC Capital Markets, AI Engineer - Python, KDB, PyTorch, Cassandra, Pandas, Numpy

May 2021 – April 2022

- Improved code architecture of Aiden, a reinforcement learning algorithm which had traded over \$100 billion in securities, so that the architecture is cleaner, more computationally efficient and scalable.
- Created a transfer learning tool which was used to reduce the training time of a new trading algorithm from several months to 2 weeks while costing less money to train.
- 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, Numpy

Sept – Dec 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.

Notable Projects

Neo-Zero – C++, OpenGL, Python

2016-2021

- 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.

Metagram – React, Node.js, MongoDB, Google Cloud, OpenCV

2022

- Won 1st place, Best Use of Google Cloud and Small Business Challenge at the UofT Hacks IX hackathon.
- Created a social network which uses augmented reality to enable people to share their artistic creations.

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.