

TYLER KOWALSKI

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Technical Skills

Languages: Python, SQL, Racket, HTML/CSS

Developer Tools: VS Code, GitHub, Jupyter Notebook

Technologies/Frameworks: TensorFlow, NumPy, CV₂, Matplotlib

Education

University of Waterloo

Sep. 2021 - Apr. 2026

Bachelor of Computer Science

Waterloo, Canada

Professional Development (Online Courses)

DeepLearning.AI

Sep. 2021

Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization

DeepLearning.AI

Aug. 2021

Neural Networks and Deep Learning

Experience

UTinder

Sep. 2021

Computer Vision Project for Hack the North

- Developed a convolutional neural network that rates the attractiveness of a user's Tinder profile using **TensorFlow Keras** and **Python**
- Implemented dropout and Adam optimization to reduce variance. Image normalizing layers were added within the model for ease of deployment

Pokemon ML

Aug. 2021

Image-based Binary Classifier Identifying Grass-Type Pokemon

- Created an DNN that predicts whether or not a given image is a grass-type Pokemon with 86% test accuracy, entirely with **Python**, **CV₂** and **Numpy**
- Worked on manually, vectorizing and preprocessing datasets, implementing forward propagation with linear algebra, and implementing backward propagation, using gradient descent, with matrix calculus

Wellness Bot

July 2021

NLP Project for Explore Hacks

- Designed a bag-of-words model, using word embedding with **Tensorflow Keras** and **Python**, that detects suicidal messages
- Utilized L2 regularization and mini-batch gradient descent in training the model

Boosted Bot

July 2021

Discord Bot that Parses and Analyzes Data from League of Legends Games

- Built a discord bot with discord.py that finds new League of Legends games played of users put on a "checker" by making regular HTTP requests to Riot Games' API, provides a detailed statistical analysis of the new game, and then stores the data in a local database using **SQLite**

Awards / Extracurriculars

SLG Scholarship in Mathematics

June 2021

Regional Scholarship

- Achieved highest top 6 average including 3 university math courses in York Region (rank 1 / 11, 081)

Governor General's Academic Award

June 2021

High School Award

- Achieved highest grade 11 and 12 combined average in high school (rank 1 / 416)

AP English Award

June 2021

High School Award

- Achieved highest AP English mark in high school (99%)