# Tyler Kowalski

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tkowalski.ca

#### Technical Skills

Languages: Python, SQL, Racket, HTML/CSS Developer Tools: VS Code, Juypter Notebook

Technologies/Frameworks: TensorFlow, NumPy, CV<sub>2</sub>, Matplotlib, GitHub

## Education

## University of Waterloo

Sep. 2021 - Dec. 2025

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,  $CV_2$  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 by 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

York Region

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

### Governor General's Academic Award

June 2021

Markham District High School

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

#### Future Tech Computers

July 2015 - Mar. 2020

President

• Started and ran Ebay-based computer buying and selling business, averaging \$1,000 a year in revenue