

# TYLER KOWALSKI

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🌐 [tkowalski.ca](http://tkowalski.ca)

## Technical Skills

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**Languages:** Python, SQL, Racket, HTML/CSS

**Developer Tools:** VS Code, Jupyter Notebook

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

## Education

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**University of Waterloo**

**Sep. 2021 - Dec. 2025**

*Bachelor of Computer Science*

*Waterloo, Canada*

## Professional Development (Online Courses)

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**DeepLearning.AI**

**Sep. 2021**

*Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization*

**DeepLearning.AI**

**Aug. 2021**

*Neural Networks and Deep Learning*

## Experience

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**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<sub>2</sub>** 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

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**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).

**AP English Award**

**June 2021**

*Markham District High School*

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