Tyler Kowalski

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Technical Skills

Languages: Python, SQL, Racket, HTML/CSS
Developer Tools: VS Code, GitHub, Juypter Notebook
Technologies/Frameworks: TensorFlow, NumPy, CV_2, Matplotlib

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.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**
                                                                                          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%)