

TYLER KOWALSKI

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Education

University of Waterloo

Bachelor of Computer Science

Sep. 2021 - Dec. 2025

Waterloo, Canada

Professional Development

DeepLearning.AI

Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization

Sep. 2021

DeepLearning.AI

Neural Networks and Deep Learning

Aug. 2021

Technical Skills

Languages: Python, SQL, Racket, HTML/CSS

Developer Tools: VS Code, Jupyter Notebook

Technologies/Frameworks: TensorFlow, NumPy, CV₂, Matplotlib, GitHub

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

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