

# ARYAN MISRA

## MACHINE LEARNING DEVELOPER

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## ABOUT ME

I'm a 15-year-old student from Toronto, Ontario. I've always been passionate about finding solutions to meaningful problems. Recently, I've been learning about machine learning and I'm excited to be working with a technology that could make such a huge impact on the world! Right now, I'm learning about how I can leverage deep learning in the field of genomics.

## EMPLOYMENT

### TAC SPORTS (LIFETIME SKILLS ACADEMY)

Lead Technology/Finance Instructor Oct. 2018 to May 2019  
Manage, lead and teach technology programs at Toronto French Schools, and Northmount School.

### SKINTELLIGENT PTE LTD.

Machine Learning Developer Singapore  
July 2019 to Current  
Building and deploying models for use in the skin healthcare industry.

## PROJECTS

### NEURASCALE

Winner of Tensorflow 2.0 Hackathon.

### FAST STYLE TRANSFER WEB APP

Demonstrates use of the Fast Style Transfer Algorithm proposed by Johnson et al. Built on top of ML5JS's Tensorflow JS library.

Mar. 2019 to Apr. 2019

### SEQ2SEQ CHARACTER BASED MACHINE TRANSLATION WEB APP

This project demonstrates how a pre-trained sequence-to-sequence models can be used in the browser. It is based on the Keras LSTM-seq2seq model and uses a character based model to translate the text (as opposed to a word based model).

Mar. 2019 to Mar. 2019

### SKIN LESION CLASSIFICATION AND DIAGNOSIS MODEL

Built and deployed a skin lesion classification model using convolutional neural networks. Model classifies 7 different types of skin lesions by taking an image input, to an 85% accuracy on lab images. Trained on the HAM10000 dataset, built with Keras, deployed with TensorflowJS. Article published on Towards Data Science on this subject.

Nov. 2018 to Dec. 2018

### SINEWAVE DENOISING

Using time-series analysis with LSTMs to predict sinewaves from noisy inputs

Feb. 2019 to Feb. 2019

## COURSES

### INTRODUCTION TO GENOMIC TECHNOLOGIES · Coursera (John Hopkins University)

Gives an introduction to modern genomic technologies and experimental tools we use to measure it.

### MACHINE LEARNING · Coursera (Stanford University)

Completed Andrew Ng's course on Machine Learning (Coursera). This taught me many of the basic concepts, intuition, and theory behind machine learning algorithms.

## PUBLICATIONS

### Making Art with a Webcam · Published on Towards Data Science

An implementation and explanation of Style Transfer, slow and fast. Read here.

Mar. 2019

### Using RNN's for Machine Translation · Published on Towards Data Science

An introduction to Recurrent Neural Networks, LSTM, and their applications in Machine Translation. Read here.

Mar. 2019

### Capsule Networks: The New Deep Learning Network · Published on Towards Data Science - 20,000+ Reads

A guide and introduction to understanding and using Hinton's proposed Capsule Networks. Read here.

Jan. 2019

### Logistic Regression Application Article · Published on Towards Data Science

Published an article on "Towards Data Science" regarding the applications of Logistic Regression, specifically spam classification. Read here.

Nov. 2018

### Skin Lesion Classification Project Article · Published on Towards Data Science

Published an article on my Skin Lesion Classification project and also talk about Convolutional Neural Networks. Read here.

Dec. 2018

## EDUCATION

### TOPS @ Marc Garneau Collegiate Institute

Sept. 2017 to Current

According to Maclean's Magazine, the TOPS Program at Marc Garneau Collegiate Institute is one of Canada's most prestigious math and science programs, offering a university level classroom experience.

## AWARDS

### University of Ontario Institute of Technology · UOIT ENGINEERING ROBOTICS COMPETITION

Nov. 2018

- 1st Place Award
- Engineering Award

## SKILLS

**PROGRAMMING:** Python, HTML/CSS, Javascript, Java, C++, R, Flask

**MACHINE LEARNING:** Tensorflow, Keras, Pytorch, Azure, GCP, Tensorflow 2.0