CMPM 202 W2020
Computational Media Research

Project 2

You will work in small teams to create neural networks using TensorFlow or another machine learning framework, such as PyTorch, Runway ML, or ml5.js.

1. Generate text using a neural network (25 pts)

Using, modifying, or implementing char-rnn, BERT, GPT-2, or another text algorithm, train or use a neural network with a text dataset of your choice to generate output in the style of that text.

2. Generate multimedia output using a deep learning neural network (75 pts)

Ideas:

- Train an autoencoder that learns to emulate some form of image processing, such as colorizing black and white photos, performing super resolution, etc.

- Use a generative adversarial network to create new images or sounds.

- Use a convolutional neural network to detect and segment features in media data.

- Implement a style transfer algorithm to apply features from source data onto a target.

You will post your code along with a Readme to GitHub (or another git repository). In the Readme, you will include an example output from your code (text for Part 1 and images/sounds/etc for Part 2), you will provide clear instructions on how to run your code, and you will present your process in developing a successful ML project. You will give a short presentation of your work in class on Thursday, 2/13.