Ryan Chen 893219394

Frank Ngo 889272738

CPSC 481

Assignment 2

Currently, we are dissecting the TensorFlow sample code. The sample code does image generation similar to the way we were planning on doing. It currently has a generator and a discriminator that takes in the mnist dataset and generates images to try and replicate handwritten numbers. There is also code that saves and loads the latest model, so we can stop and restart training without losing our progress. At the very end, there is some code that takes the images and turns them into a gif so we can show the overall progress of the image generation from each of the different epochs.

Right now, we need to do more research into the different model layers that TensorFlow has in order to customize the neural network for our use case. We also need to figure out how we want to pass the apple image dataset into our model for training. The previous plan was to have the models set up for training by 10/12, but more research needs to be done before we can get to this point. The plan is to push back this goal date to 10/19 and have the implementation for the machine learning portion done by then.

One challenge we are still facing is horsepower. When working from home, we only have one tower with a dedicated GPU, and it takes several seconds to run each epoch. Hopefully, by adjusting the code, we can reduce the amount of time it takes to finish one epoch of training. Since the sample code trains the models by having it generate 16 images at a time, each epoch is taking about 400 seconds to run on the CPU and 8 seconds on the GPU. Google Collab takes about 25 seconds for one epoch. Going forward, our best option is to use a powerful GPU or ECS computers to train our models.