LAST WEEK

- Worked with Pre-Trained Models
- Reviewing Code from Past Paper
- Training and Testing this Code
- Extracted Features from ImageNet
CURRENT PROGRESS
CREATING SCRIPTS

Main Script

% This is the main script for the first experiment.
% Extracts features from ImageNet (convfc6, relu6, convfc7, relu7)
featureExtractor
% Generates feature vectors for each layer
getFeatVecs
% Generates one final feature struct
genFeatureMatrix
% Trains an SVM classifier on the features after placing them in single vector
trainSVM

- Created various scripts and functions to extract the features from 4 parts of the ImageNet Neural Network.
TRAINING SVM CLASSIFIER

- Trained an SVM classifier with the extracted features.
- Took about an 90 min to train.
- Tested the model afterward.
- Currently retraining due to errors.

**Previous Model**

```
optimization finished, #iter = 59283
nu = 0.859956
obj = -113266.057299, rho = -86.356657
nSV = 16824, nBSV = 14900
Elapsed time is 1501.001899 seconds.
```

**New Model**

```
optimization finished, #iter = 11103
nu = 0.999839
obj = -1.#IND00, rho = 7524602.391736
nSV = 18620, nBSV = 18620
Elapsed time is 5947.413046 seconds.
```
TESTING DATA

- Working on creating an appropriate test function for the trained model.
- Must perform tests in a 5-fold validation setting. Therefore, will use the TCMScore Dataset of five images.
ERRORS & CHALLENGES

- Large error values for mean-squared error
- Presently reviewing code to find any errors and retraining SVM classifier
NEXT STEPS

• Fix Errors & Test SVM classifier again

• Start working with Fisher Vectors

• Begin researching and working on videos