**Video Classification Assignment**

**Feature Engineering Process**

For the dataset given, we could do the following for feature extraction.

We have different durations of the videos available and therefore I decided to capture the frames of the video per second as features.

Using a 3D convolutional Network would work in this process as each frame would be like a 2D image and use time duration as the other dimension.

We use Keras and Theano to solve this problem statement.

As video is a sequence of frames, we can create a model that extends in the time domain, processes a fixed- length contiguous sequence of frames, so that it can learn spatial- temporal features.

This frames are later converted into a numpy array to be used as inputs for the 3D convent architecture.

The hyper parameters like the pooling layer size and filter size can be changed and experimented. After a few hyper parameter changes I was able to get an F-score of around 70 percent and a testing accuracy of 61 percent accuracy for the data available.