

# **Final Project: CNN Models**

**Nelson Isao Nauata Junior**

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## **3D Convolutional Neural Network**

For this model we are planning to implement a 3D Convolutional Neural Network, which will be fed by 3D features maps. These feature maps would be extracted from the preprocessed videos, where two of the dimensions would represent the height and width of the videos, the third dimension would be represented by the sequence of frames in the videos. Note that the classification would be achieved by convolving through the whole video at the same time.

## **Recurrent Neural Network + 2D Convolutional Neural Network**

## **Multi-scale 3D Convolutional Neural Network or/and Recurrent Neural Network + 2D Convolutional Neural Network**