**Description**

**Why I chose this Model?**

Since we were dealing with the classification of images (pavbhaji or not) so I chose ResNet-50 CNN (Convolutional Neural Network) pretrained on ImageNet dataset as the backbone network for extracting the features from the images. ResNet-50 uses residual blocks with skip connections and helps in training deeper networks.

**Challenges I faced while working on the data and approach used to resolve them?**

For this challenge we were given train images (with positive and negative train samples) but there were no test images which were mentioned in the json meta-data file. So, I had to create the URLs from meta-data (using ‘shortcode’ column) to scrape the test images from the Instagram. Also, there were 110 entries for videos in the json meta-data file (total 1500 entries) which were dropped during the pre-processing step leaving 1390 entries for image files. Out of these 1390 image 452 were used for training (406 images) and validation (46 images) using 90:10 train-validation split. After this there were 938 test image entries left in the json meta-data file. Out of 938 test images only 716 were downloadable from Instagram. So, we after training model and optimizing it on validation-set we tested our model against these test images. We have predicted the class for test images (if image contains pavbhaji its 1 else 0). Due to lack of ground truth data against these test images we couldn’t calculate accuracy of the model, but we determined the model accuracy on the validation set to be 83.3% after training the model for 20 epochs.