CELEBRITY CLASSIFICATION

The task is to build a neural network which is used for celebrity classification. Our data set have 5 celebrities mainly Virat Kohli, Serena Williams, Roger Federer, Maria Sharapova and Lionel Messi. I have built a Convolutional Neural Network to classify them.

The first step is to import the required libraries. Then we list out the paths for different directories to access the dataset. Then we iterate over each image and after some conversion we save the image to a list and corresponding label to another list. After this step we will be splitting the dataset into training and testing with 80% for training and 20% for testing. Then we normalize the dataset. Now we build the CNN with following architecture:

- First, we initialize a sequential layer
- 2D convolutional layer with 32 filters each of size 3x3 used ReLU as the activation function
- Then we add a 2D max-pooling layer with pool size 2x2
- Then we have a flattening layer
- Then we add a Dense layer with 256 neurons and ReLU as the activation function
- Dropout layer with 0.5 dropout ratio
- Again, we add a dense layer with 512 neurons and activation function as ReLU
- The final Dense layer is the output layer with 5 neurons, softmax is the activation function (the task has 5 classification class so we added 5 neurons)

The model is compiled using Adam optimizer. The model is trained with an epoch of 50 and with a 10% validation split. The model has an accuracy of 88.24 %