Project Overview

The dataset was imported in csv format and it was divided in to X\_train ,Y\_train,X\_test,Y\_test for training and testing respectively.Y\_test and Y\_train were changed to categorical variables.

Important functions used :

keras\_model: This method will make the architecture of Cnn,and will return the model Architecture and the callback list.Here the best model gets saved so there is only one model in callback list and that will be used later. Parameters::Imagedimensions x,y.,Classes /Packages used:Conv2D,MaxPooling2D,Flatten,Dense,ModelCheckpoint .

keras\_predict: This will take an image as a parameter and will return the alphabet class with maxprobablity to which the inputted image belongs to. Parameters::Model object ,Inputted Image. Parameters::Inputted Image.

keras\_processimage: This will take the inputted image and will resize it and change its dimensions.

main: This method will capture image of the alphabet drawn on the frame using webcam and it will do the processing and predict the class of the alphabet using keras\_predict method.It will show the outputted letter on the frame.The method will recognize only blue colour objects.When the user will draw a hindi alphabet then it will predict to which class it belongs .Parameters::None,Classes/Packages :Opencv,