Result Explanation

Dataset Link

Used Dataset

<https://drive.internxt.com/s/file/9702fd7f680e28bbda38/9f80a3e4efe94acaf8ddc112c83be1be97722f386f86a8f490518f95d292ac13>

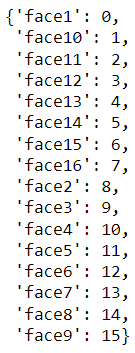
Entire Dataset

<https://www.kaggle.com/datasets/stoicstatic/face-recognition-dataset>

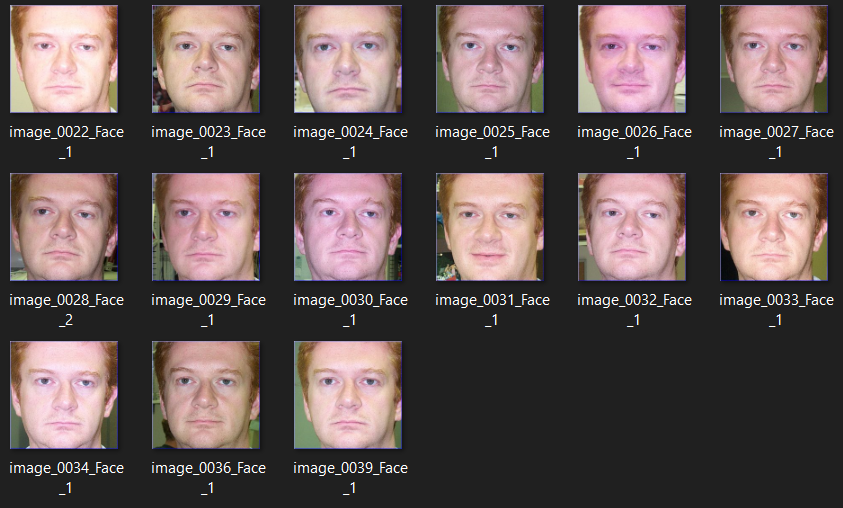
Image Data Scan (Train+Test Data)



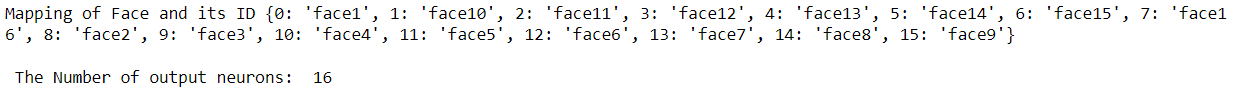
Scanned Classes (Training Dataset)



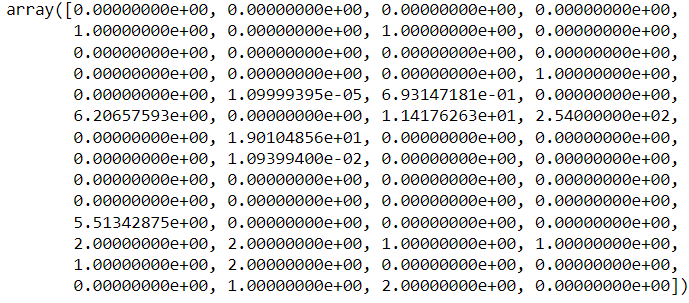
Different Expression in Single Class of Image(Sample)



Mapping and Label ID



Converting Data into NumPy Array Format



Normalizing Data for BPCNN



Model Summery BPCNN

Model: "bpcnn"

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Layer (type) Output Shape Param #

=================================================================

conv2d\_4 (Conv2D) (None, 60, 60, 16) 1216

max\_pooling2d\_4 (MaxPooling (None, 30, 30, 16) 0

2D)

conv2d\_5 (Conv2D) (None, 26, 26, 64) 25664

max\_pooling2d\_5 (MaxPooling (None, 13, 13, 64) 0

2D)

flatten\_2 (Flatten) (None, 10816) 0

dense\_4 (Dense) (None, 64) 692288

dense\_5 (Dense) (None, 16) 1040

=================================================================

Total params: 720,208

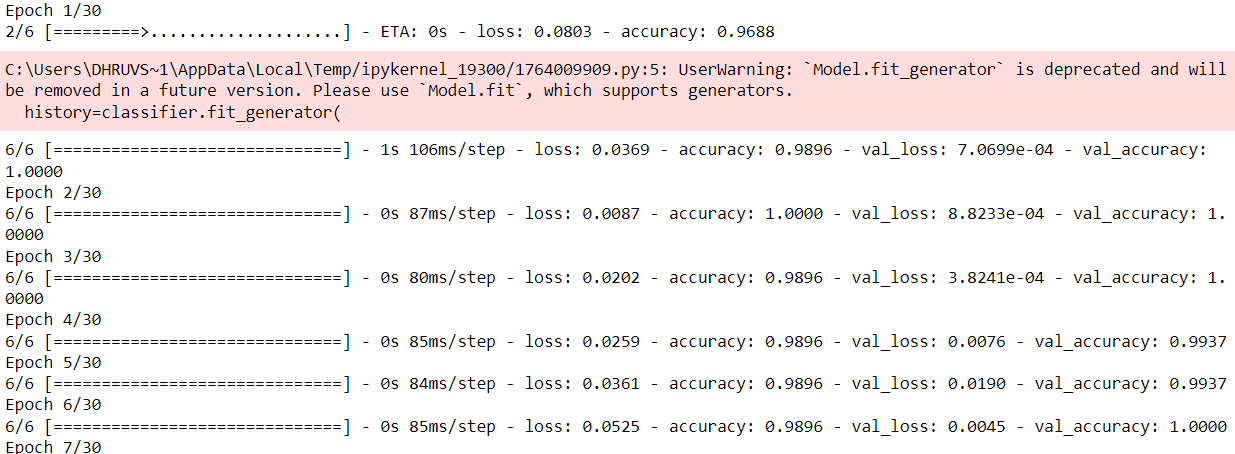
Trainable params: 720,208

Non-trainable params: 0

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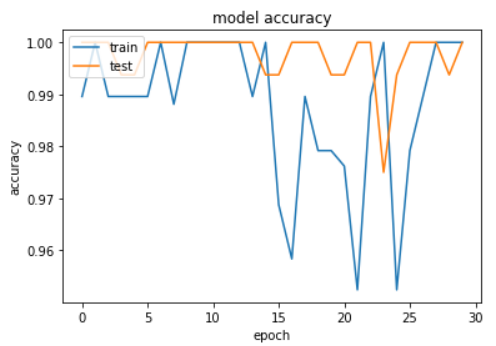
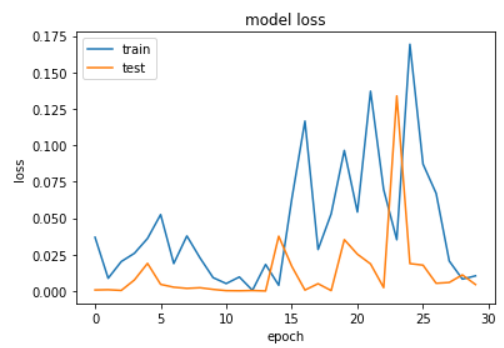
Model Execution



Model’s Measured Parameters



Model’s Accuracy/Loss Graphs

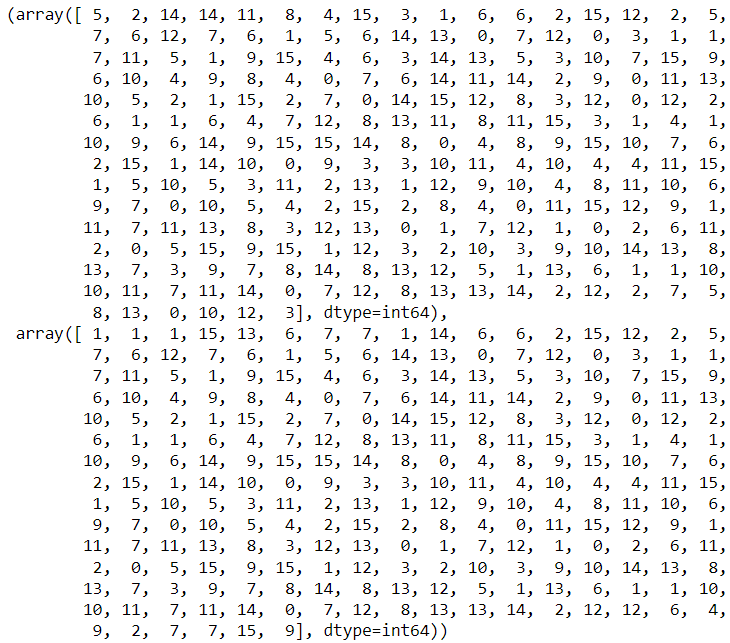
 

Shape and Class of Normalize Testing and Prediction Data

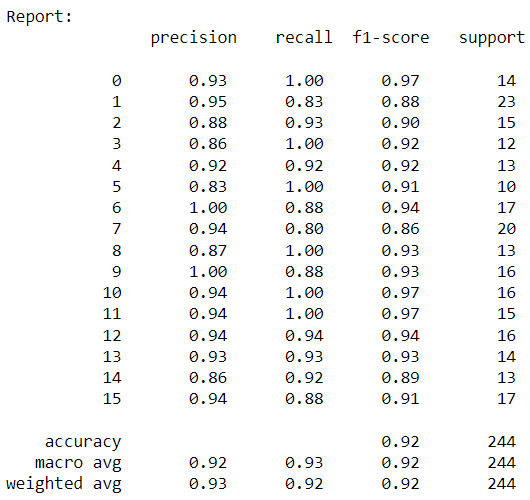




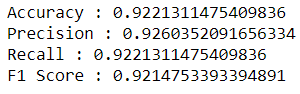
Test and Prediction Data



BCNN’s Classification Report



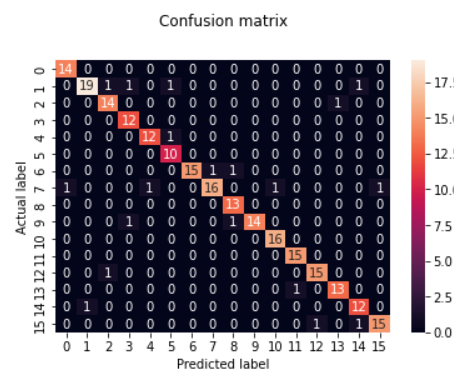
Model’s Scores



Mean Square Error/Mean Absolute Error of Model



Confusion Matrix



AUC/ROC Curve Score

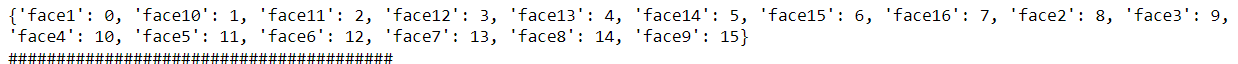


Testing Single Image Prediction

Input



Test Scan BCNN



Prediction



Actual Image

