



we are going to implement an Emotion Recognition System or a Facial Expression Recognition System on a Raspberry Pi. We are going to apply a pre-trained model to recognize the facial expression of a person from a real-time video stream. The "FER2013" dataset is used to train the model with the help of a VGG-like Convolutional Neural Network (CNN).

We are using Two Classes here that are 'Happy', 'Sad'. So, the predicted images will be among these classes.

```
emotion_prediction = emotion_classifier.predict(gray_face)
emotion_probability = np.max(emotion_prediction)
emotion_label_arg = np.argmax(emotion_prediction)
emotion_text = emotion_labels[emotion_label_arg]
emotion_window.append(emotion_text)
if len(emotion_window) > frame_window:
    emotion_window.pop(0)
try:
    emotion_mode = mode(emotion_window)
except:
```

```
if emotion_text == 'sad':
    color = emotion_probability * np.asarray((0, 0, 255))
elif emotion_text == 'happy':
    color = emotion_probability * np.asarray((255, 255, 0))
else:
    color = emotion_probability * np.asarray((0, 255, 0))
```