

1. Get Data

I get the the data from Kaggle

<https://www.kaggle.com/ananthu017/emotion-detection-fer>

The dataset has 7 folders for training (happiness, neutral, sadness, anger, surprise, disgust, fear) and 7 folders for testing (happiness, neutral, sadness, anger, surprise, disgust, fear).

It has 5,685 examples of 48x48 pixel gray scale images.

2. Clean, Prepare & Manipulate Data

- I used the keras preprocess function for preparing images.
`tf.keras.applications.densenet.preprocess_input`
- The data already split into testing and training folders

3. Train Model

- Extracting features using DenseNet
- Then train the model using 4 denis layers.
- SGD was used for optimizers `categorical_crossentropy` as a loss function

4. Test Model

The model gives an accuracy of 0.8910888723078322