**Documentation**

*Emotion Recognition:*

Dataset: FER2013

Libraries : numpy, pandas, opencv-python, keras, tensorflow, tkinter, dlib

Preparing dataset:

Functions.py : Contain functions of array to image converter and formatting image in dimensions we needed.

Saving\_data.py: Saving formatted images in emotion wise folders.

Face detection: haarcascsde models of opencv.

hist() function: Increase contrast in image. Histogram equalization process is used.

train\_model(): training keras sequential model.

Save\_model(): Save trained model into disk.

Load\_model(): Loading saved model from disk.

Predict(): Predicts emotion present in image

**Running program:**

Training: Import all functions from functions.py.

Run saving\_data.py

Run main.py – Follow commands of training model.

Training step completed.

Running on webcam:

Run main.py and follow load model steps

Run main\_2.py