Prerequisites

What things you need to install the software and how to install them

- opencv
- numpy
- tqdm
- tensorflow
- Matplotlib

Installation

➢ Opencv

```
pip install opencv-python
```

➢ Numpy

```
pip install numpy
```

➢ Tqdm

```
pip install tqdm
```

➢ tensorflow

```
pip install tensorflow==2.0.0-alpha0
```

➢ matplotlib

```
pip install matplotlib
```

➢ sklearn

```
pip install sklearn
```

Code Can be Downloaded From
=>https://drive.google.com/file/d/1o28shm5697-G5d7B0k6XwYZy90bMn0XU/view?usp=sharing

Guidelines to Use the Code

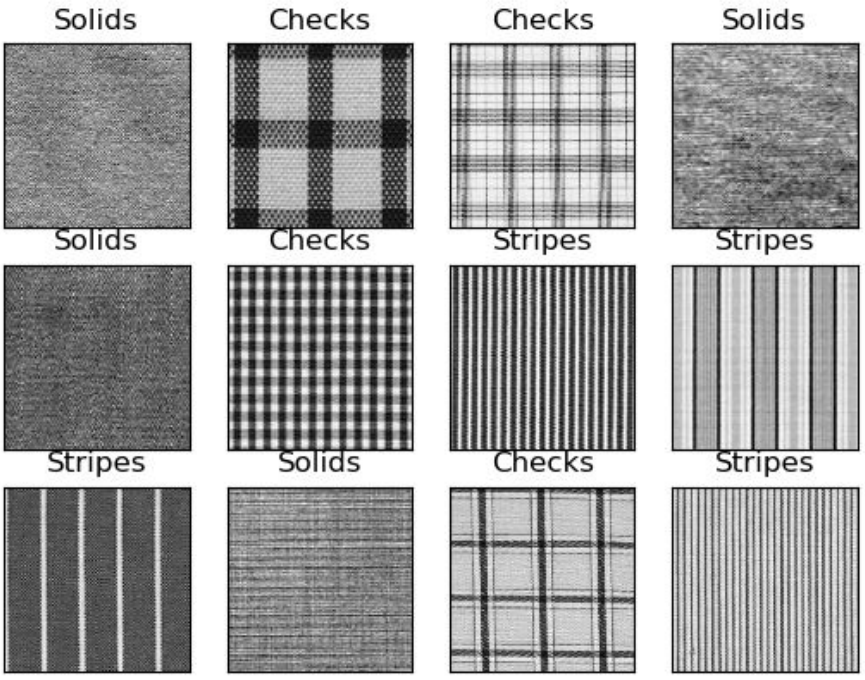
- Provide File Path of the “Training Set” in your PC. **(line 7)**
- TRAIN_DIR = 'E:/FashionDx/Training Set'
  Enter File Path “of Training Set” in your instead of 'E:/FashionDx/Training Set'
  Download Training Set from =>

  (The Training Set folder must be same as the one provided.
  With sub folders checks, solids, stripes.
  checks with Large, Medium, Small
  stripes with vertical_dense_stripes, vertical_large_stripes,
  vertical_medium_stripes)

- Provide File Path of Testing Data, “Test” in your PC **(line 8)**
  TEST_DIR = 'E:/FashionDx/Test'
  This Folder was not provided.
- Download from =>
  https://drive.google.com/drive/folders/1NsZtnPG500TY3j-6USMKmnZnjwWvcKVo?usp=sharing
- It can be created by removing 12 images of various kinds Checks, Solids, Stripes from Training Set and placing them here.

  (If you wish to place more or less than 12 images in the folder make a change in line 174. i.e if you wish to place 15 images change line 174 y=fig.add_subplot(3,5,num+1). To get Images displayed in 3x5 grid instead of 3x4.
  Helps to have a better view.)

Code Output



Files in “Test” folder are displayed with output label.

(Images appear so as cv2.IMREAD_GRAYSCALE was used.

As colour is not of much use to differentiate between solids, stripes, checks.)

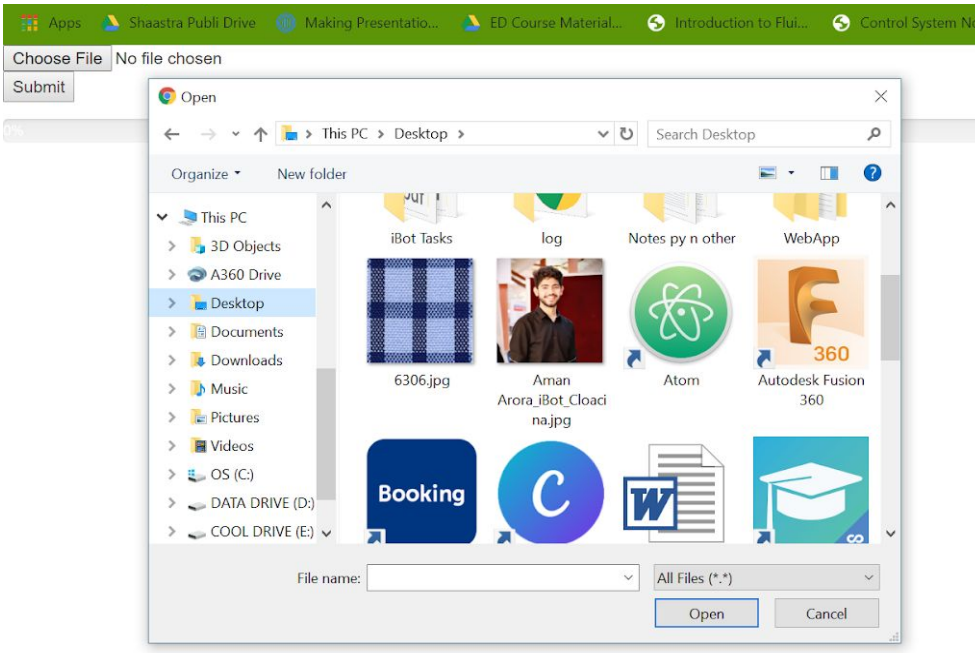
Unlike Checks, Solids, Stripes
Prints cannot be trained accurately, as each of them are unique in themselves.
If an image doesn't accurately match with Checks, Solids or Stripes then it can be said to be Prints.

Accuracy:
Val_acc = 0.7341
Loss:
Val_loss = 0.82530

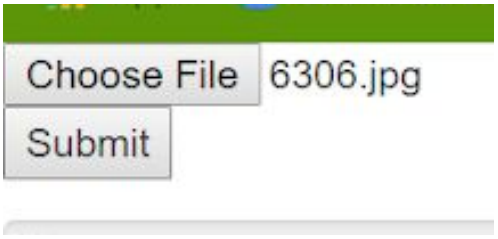
Produces:
Presion
Recall
Fscore
Confusion Matrix

Web App

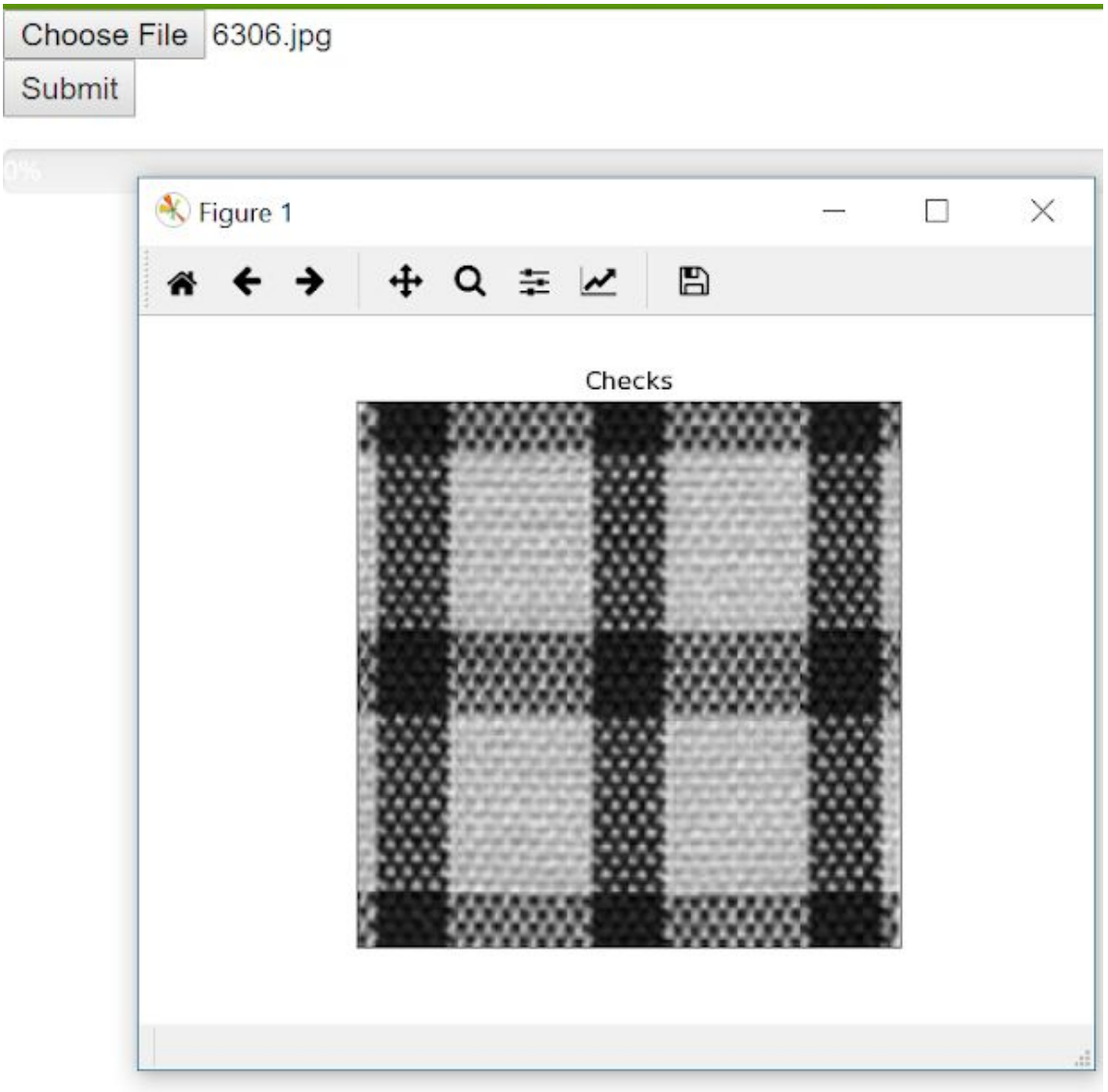
Preferably use Google Chrome
Click on "Choose File"
Choose image from your PC



Submit



Output



It take 8-12 mins when using it first time.
Takes 2-3 mins after that.