

selfie x python notebook Creating t81\_558 New Tab Backgrc autoenc GAN La New Tab OMS- C Capabil Sign ou Shared b23Inte New Tab

← → ↻ kaggle.com/jaswanthreddysareddy/selfie-regression/edit

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Draft Session (15m) HDD CPU RAM GPU

[1]:

# Regression model on Selfie dataset

[21]:

import keras  
from keras.models import Sequential  
from keras.layers import Dense, Dropout, Flatten  
from keras.preprocessing import image  
from tensorflow.keras.applications.resnet50 import ResNet50  
import numpy as np  
import pandas as pd  
import matplotlib.pyplot as plt  
from sklearn.model\_selection import train\_test\_split  
from tqdm import tqdm  
from keras.layers import Input, Lambda, Dense, Flatten  
from keras.models import Model  
import matplotlib.pyplot as plt  
from sklearn.metrics import mean\_squared\_error, r2\_score  
from keras.preprocessing import image  
from keras.preprocessing.image import ImageDataGenerator  
from glob import glob

[2]:

df=pd.read\_csv("../input/selfie-csv/selfie\_dataset.csv")

[3]:

df.head()

Console

Data + Add data

input (1.06 GB)  
selfie-csv  
selfie2  
Selfie-dataset  
images  
00a454da495e11e28a7...  
00cddb96ac4c11e3a30...  
01cdd7aa1a1a11e2aaa82...  
024696bead0c11e389d...  
026df048221a11e2b521...  
02b511eed26911e2851d...  
02ee8060b02f11e38fe0...  
0303318e48cc11e2970f...  
032a49b6bffb11e3b9ca...  
0345a4babff911e39586...  
03d27058678811e394b...  
044c14a2bff911e396ce...  
049a7d4eae611e3ace...  
04ed1c2ebffb11e38f8c0...  
0598ce50b1f711e3bd39...  
05b81dfec0d011e38620...  
05db7b34b9aa11e1a9f7...  
061897ee69b811e2896...  
06c71a9ead0011e3879b...  
06eade16a91311e39101...

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df=pd.read\_csv("../input/selfie-csv/selfie\_dataset.csv")

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[3]: df.head()

Out[3]:

	Unnamed: 0	image	score	partial_faces	is_female	baby	child	teenager	youth	middle_age	senior
0	0	00a454da495e11e28a7322000a1fa414_6	3.901	1	1	0	0	0	1	0	0
1	1	00cddb96ac4c11e3a30212279ba1b65f_6	4.385	1	1	0	0	0	0	0	0
2	2	01cdd7aa1a1a11e2aaa822000a1fb0dd_6	4.243	0	1	0	0	1	0	0	0
3	3	024696bead0c11e389d50ec42b3b1b1c_6	4.169	0	0	0	0	1	0	0	0
4	4	026df048221a11e2b52122000a1fa4b5_6	3.873	0	1	0	0	0	0	1	0

[4]: df=df.drop(columns=['Unnamed: 0', 'image', 'partial\_faces'])  
df.head()

Out[4]:

	score	is_female	baby	child	teenager	youth	middle_age	senior
0	3.901	1	0	0	0	1	0	0
1	4.385	1	0	0	0	0	0	0
2	4.243	1	0	0	1	0	0	0
3	4.169	0	0	0	1	0	0	0
4	3.873	1	0	0	0	0	1	0

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Console

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4 3.8/3 1 0 0 0 0 1 0

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[5]:  
Y=df['score']  
Y.shape

Out[5]: (46836,)

[6]:  
X = df.drop(['score'], axis=1)  
X.shape

Out[6]: (46836, 7)

[7]:  
x\_train, x\_test, y\_train, y\_test = train\_test\_split(X, Y, test\_size=0.2, random\_state=4)

[8]:  
y\_train

Out[8]:  
11979 4.805  
32020 4.147  
14708 4.026

Console

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input (1.06 GB)

selfie-csv

selfie2

Selfie-dataset

images

00a454da495e11e28a7...

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0303318e48cc11e2970f...

032a49b6bffb11e3b9ca...

0345a4babff911e39586...

03d27058678811e394b...

044c14a2bff911e396ce...

049a7d4eae6b11e3ace...

04ed1c2ebffb11e38f8c0...

0598ce50b1f711e3bd39...

05b81dfec0d011e38620...

05db7b34b9aa11e1a9f7...

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📄 y\_train

Out[8]:

11979	4.805
32020	4.147
14708	4.026
482	5.140
44470	3.840
...	
23346	3.889
11863	4.255
27063	4.904
8366	4.177
17530	5.369

Name: score, Length: 37468, dtype: float64

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[9]:

```
# Training the model

from sklearn.linear_model import LinearRegression
model=LinearRegression()
```

[10]:

```
model.fit(x_train,y_train)
```

Out[10]

```
LinearRegression()
```

Console

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Selfie-dataset

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03d27058678811e394b...

044c14a2bff911e396ce...

049a7d4eae611e3ace...

04ed1c2ebffb11e38f8c0...

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05db7b34b9aa11e1a9f7...

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06eade16a91311e39101...

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[11]:

y\_pred=model.predict(x\_test)  
y\_pred

Out[11] array([4.33472507, 4.29335702, 4.4336079 , ..., 4.36987468, 4.36987468,  
4.40137952])

[12]:

from sklearn.metrics import mean\_squared\_error,mean\_absolute\_error,r2\_score  
  
print('Mean squared error (MSE): %.4f' % mean\_squared\_error(y\_test, y\_pred))  
print('Mean Absolute error (MSE): %.4f' % mean\_absolute\_error(y\_test, y\_pred))  
print(f'Root Mean Squared Error:{np.sqrt(mean\_squared\_error(y\_test,y\_pred))}')  
print('Coefficient of determination (R^2): %.4f' % r2\_score(y\_test, y\_pred))

Mean squared error (MSE): 0.3374  
Mean Absolute error (MSE): 0.4598  
Root Mean Squared Error:0.5808543015084546  
Coefficient of determination (R^2): 0.0160

[28]:

# Popularity for an image based on attributes input  
import cv2  
  
image=cv2.imread("../input/selfie2/Selfie-dataset/images/01cdd7aa1a1a11e2aaa822000a1fb0dd\_6.jpg")

2

Console

Data + Add data

input (1.06 GB)  
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Selfie-dataset  
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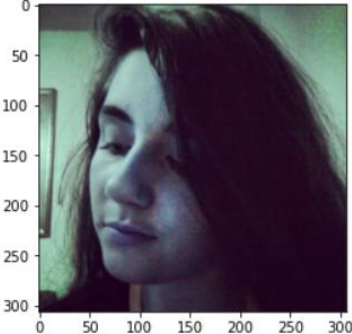
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Draft Session (15m) HDD CPU RAM GPU

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# Popularity for an image based on attributes input  
import cv2  
  
image=cv2.imread("../input/selfie2/Selfie-dataset/images/01cdd7aa1a1a11e2aaa822000a1fb0dd\_6.jpg")  
plt.imshow(image)  
print('Popularity score:',model.predict([[1,0,0,1,0,0,0]]))

Popularity score: [4.40137952]



+ Code + Markdown

image 4/14

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Data + Add data

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Console

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