```
from google.colab import drive
drive.mount('drive')
```

```
Mounted at drive
```

```
import pandas as pd
import os
from skimage.transform import resize
from skimage.io import imread
import numpy as np
```

```
os.listdir('/content/drive/MyDrive/data')
```

```
['without_mask', 'with_mask']
```

```
os.listdir('/content/drive/MyDrive/data/without_mask')
```

```
 'without_mask_920.jpg',
 'without_mask_518.jpg',
 'without_mask_57.jpg',
 'without_mask_541.jpg',
 'without_mask_626.jpg',
 'without_mask_933.jpg',
 'without_mask_812.jpg',
 'without_mask_554.jpg',
 'without_mask_913.jpg',
 'without_mask_787.jpg',
 'without_mask_601.jpg',
 'without_mask_584.jpg',
 'without_mask_873.jpg',
 'without_mask_675.jpg',
 'without_mask_975.jpg',
 'without_mask_867.jpg',
 'without_mask_802.jpg',
 'without_mask_61.jpg',
 'without_mask_924.jpg',
 'without_mask_792.jpg',
 'without_mask_847.jpg',
 'without_mask_517.jpg',
 'without_mask_505.jpg',
 'without_mask_866.jpg',
 'without_mask_610.jpg',
 'without_mask_99.jpg',
 'without_mask_725.jpg',
 'without_mask_60.jpg',
 'without_mask_537.jpg',
 'without_mask_576.jpg',
 'without_mask_879.jpg',
 'without_mask_889.jpg',
 'without_mask_839.jpg',
 'without_mask_76.jpg',
 'without_mask_637.jpg',
 'without_mask_566.jpg',
 'without_mask_947.jpg',
 'without_mask_508.jpg',
 'without_mask_645.jpg'
```

```
 'without_mask_845.jpg',
 'without_mask_958.jpg',
 'without_mask_977.jpg',
 'without_mask_893.jpg',
 'without_mask_83.jpg',
 'without_mask_515.jpg',
 'without_mask_68.jpg',
 'without_mask_621.jpg',
 'without_mask_768.jpg',
 'without_mask_751.jpg',
 'without_mask_550.jpg',
 'without_mask_983.jpg',
 'without_mask_914.jpg',
 'without_mask_909.jpg',
 'without_mask_814.jpg',
 'without_mask_651.jpg',
 'without_mask_683.jpg',
 'without_mask_590.jpg',
 'without_mask_921.jpg',
 'without_mask_845.jpg',
 'without_mask_56.jpg'
```

```
len(os.listdir('/content/drive/MyDrive/data/without_mask'))
```

```
3828
```

```
os.listdir('/content/drive/MyDrive/data/with_mask')
```

```
 'with_mask_3662.jpg',
 'with_mask_647.jpg',
 'with_mask_871.jpg',
 'with_mask_3547.jpg',
 'with_mask_40.jpg',
 'with_mask_3587.jpg',
 'with_mask_93.jpg',
 'with_mask_620.jpg',
 'with_mask_906.jpg',
 'with_mask_804.jpg',
 'with_mask_949.jpg',
 'with_mask_931.jpg',
 'with_mask_376.jpg',
 'with_mask_586.jpg',
 'with_mask_3665.jpg',
 'with_mask_3599.jpg',
 'with_mask_657.jpg',
 'with_mask_749.jpg',
 'with_mask_3689.jpg',
 'with_mask_572.jpg',
 'with_mask_3635.jpg',
 'with_mask_3514.jpg',
 'with_mask_353.jpg',
 'with_mask_896.jpg',
 'with_mask_499.jpg',
 'with_mask_426.jpg',
 'with_mask_421.jpg',
 'with_mask_398.jpg',
 'with_mask_790.jpg',
 'with_mask_655.jpg',
 'with_mask_815.jpg',
 'with_mask_3523.jpg',
 'with_mask_3679.jpg'
```

```
        'with_mask_532.jpg',
        'with_mask_3545.jpg',
        'with_mask_724.jpg',
        'with_mask_860.jpg',
        'with_mask_3666.jpg',
        'with_mask_436.jpg',
        'with_mask_431.jpg',
        'with_mask_959.jpg',
        'with_mask_3698.jpg',
        'with_mask_3711.jpg',
        'with_mask_728.jpg',
        'with_mask_3708.jpg',
        'with_mask_654.jpg',
        'with_mask_453.jpg',
        'with_mask_497.jpg',
        'with_mask_668.jpg',
        'with_mask_3588.jpg',
        'with_mask_407.jpg',
        'with_mask_61.jpg',
        'with_mask_897.jpg',
        'with_mask_77.jpg',
        'with_mask_3656.jpg',
        'with_mask_464.jpg',
        'with_mask_3527.jpg',
        'with_mask_3520.jpg',
```

```
len(os.listdir('/content/drive/MyDrive/data/with_mask'))
```

```
3725
```

```
maskpath=os.path.join('/content/drive/MyDrive/data','with_mask')
for img in os.listdir(maskpath):
   print(img)
```

```
with_mask_1425.jpg
with_mask_1753.jpg
with_mask_1710.jpg
with_mask_1547.jpg
with_mask_1599.jpg
with_mask_1229.jpg
with_mask_120.jpg
with_mask_1702.jpg
with_mask_1815.jpg
with_mask_1499.jpg
with_mask_1220.jpg
with_mask_1735.jpg
with_mask_1659.jpg
with_mask_1887.jpg
with_mask_1764.jpg
with_mask_1473.jpg
with_mask_1118.jpg
with_mask_171.jpg
with_mask_1395.jpg
with_mask_1222.jpg
with_mask_1192.jpg
with_mask_161.jpg
with_mask_1594.jpg
with_mask_1820.jpg
```

```
        with_mask_1262.jpg
        with_mask_1384.jpg
        with_mask_1085.jpg
        with_mask_1824.jpg
        with_mask_1788.jpg
        with_mask_1199.jpg
        with_mask_1240.jpg
        with_mask_1416.jpg
        with_mask_1505.jpg
        with_mask_149.jpg
        with_mask_1626.jpg
        with_mask_1870.jpg
        with_mask_1429.jpg
        with_mask_1669.jpg
        with_mask_1831.jpg
        with_mask_1758.jpg
        with_mask_1138.jpg
        with_mask_1605.jpg
        with_mask_1749.jpg
        with_mask_1509.jpg
        with_mask_1507.jpg
        with_mask_1370.jpg
        with_mask_1319.jpg
        with_mask_1432.jpg
        with_mask_1267.jpg
        with_mask_1852.jpg
        with_mask_1453.jpg
        with_mask_1387.jpg
        with_mask_1688.jpg
        with_mask_1731.jpg
        with_mask_1706.jpg
        with_mask_1172.jpg
        with_mask_1717.jpg
        with_mask_1361.jpg
        with_mask_1558.jpg
```

```
flat_data_arr=[]
target_arr=[]
Categories=['with_mask','without_mask']


datadir='/content/drive/MyDrive/data'

for i in Categories:
 print("Loading....category",i)
 path=os.path.join(datadir,i)
 for img in os.listdir(path):
  img_array=imread(os.path.join(path,img))
  img_resized=resize(img_array,(150,150,3))
  flat_data_arr.append(img_resized.flatten())
  target_arr.append(Categories.index(i))
 print("loaded",i)
```

```
    Loading....category with_mask
    loaded with_mask
    Loading....category without_mask
    loaded without_mask
```

```
from sklearn.model_selection import train_test_split
x_train,x_test,y_train,y_test=train_test_split(flat_data_arr,target_arr,test_size=
```

```
from sklearn.svm import SVC
classifier=SVC()
classifier.fit(x_train,y_train)
y_pred=classifier.predict(x_test)
y_pred
```

```
array([0, 0, 1, ..., 1, 0, 1])
```

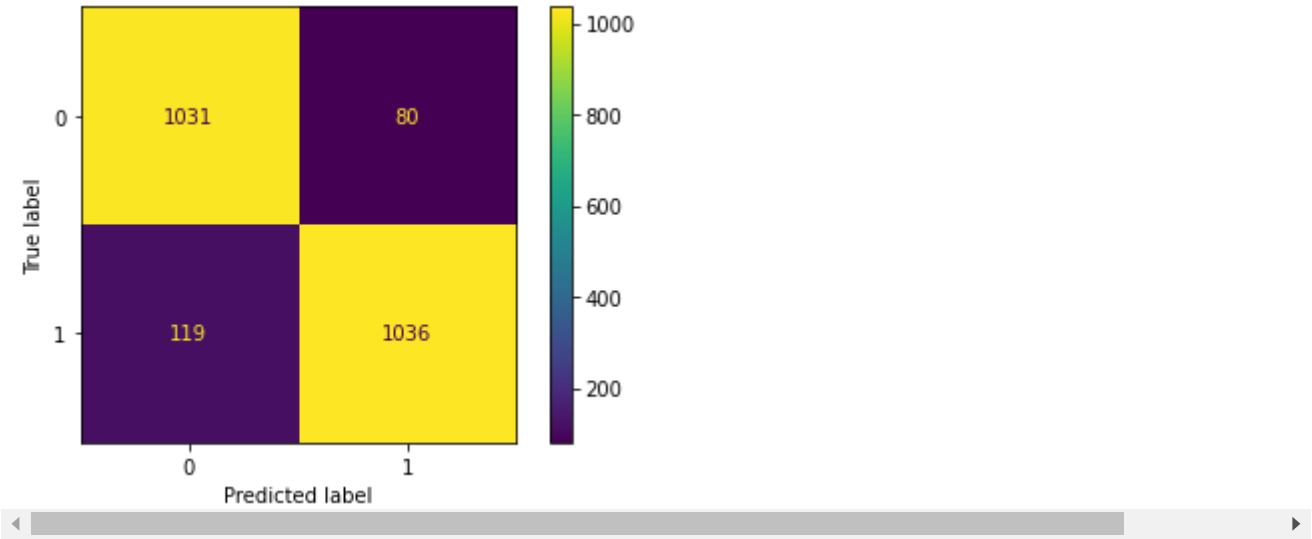
```
from sklearn.metrics import classification_report,confusion_matrix,accuracy_score,
print(classification_report(y_test,y_pred))
result=confusion_matrix(y_test,y_pred)
print(result)
print(ConfusionMatrixDisplay.from_predictions(y_test,y_pred))
```

```
              precision    recall  f1-score   support

           0       0.90      0.93      0.91      1111
           1       0.93      0.90      0.91      1155

    accuracy                           0.91      2266
   macro avg       0.91      0.91      0.91      2266
weighted avg       0.91      0.91      0.91      2266

[[1031   80]
 [ 119 1036]]
<sklearn.metrics._plot.confusion_matrix.ConfusionMatrixDisplay object at 0x7f
```




```
score=accuracy_score(y_test,y_pred)
print(score)
```

```
0.912180052956752
```

```
path1='/content/drive/MyDrive/with.jpg'
imgarr1=imread(path1)
imgresize1=resize(imgarr1,(150,150,3)).flatten().reshape(1,-1)
classifier.predict(imgresize1)
```

```
array([0])
```

```
path2='/content/drive/MyDrive/without.jpg'
imgarr2=imread(path2)
imgresize2=resize(imgarr2,(150,150,3)).flatten().reshape(1,-1)
classifier.predict(imgresize2)
```

```
array([1])
```