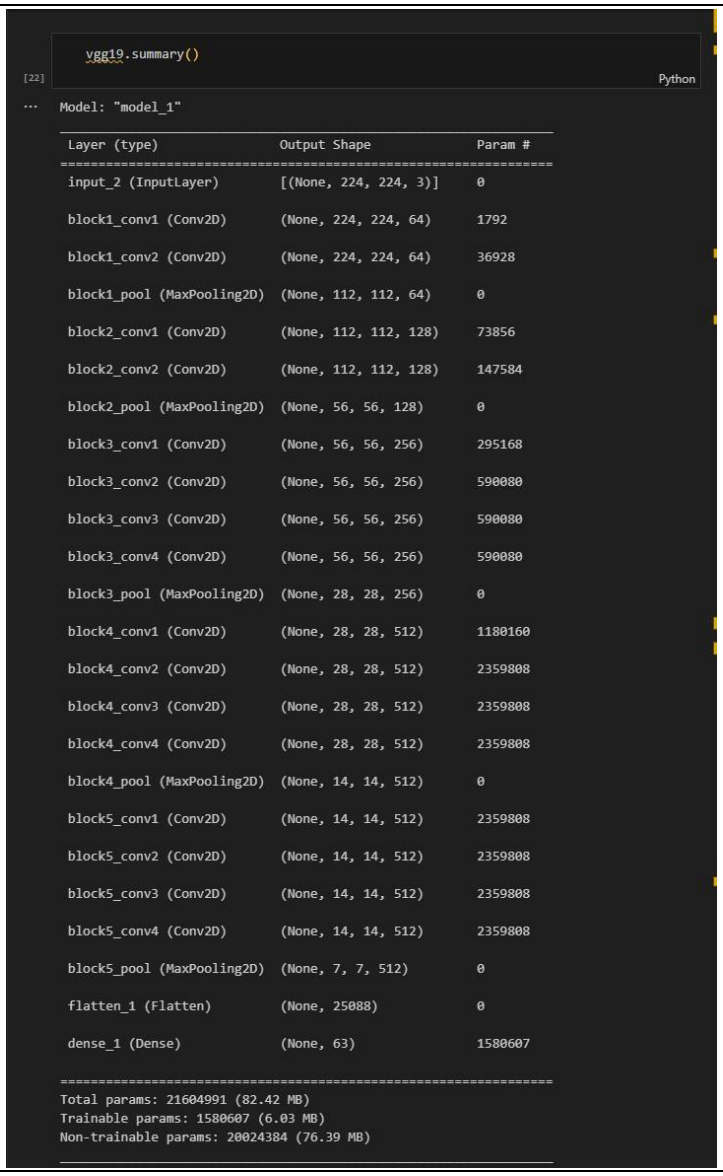
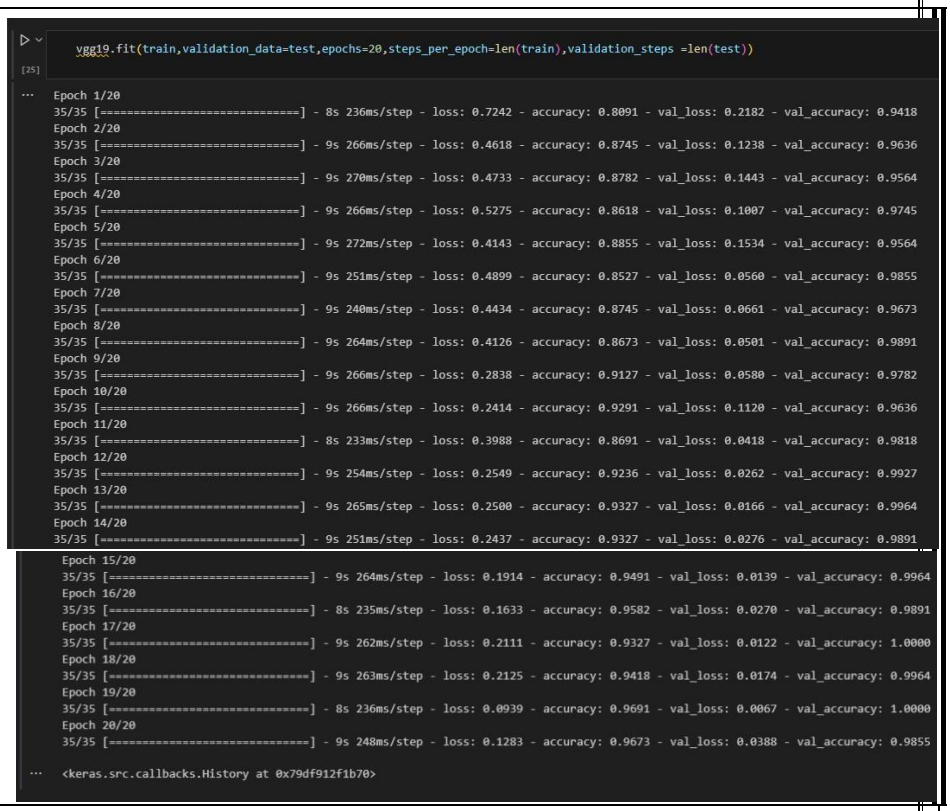
Project Development Phase
Model Performance Test

Date	17/11/2023
Team ID	Team-592815
Project Name	Fake/Real Logo Detection using Deep learning
Maximum Marks	10 Marks

Model Performance Testing:

Project team shall fill the following information in model performance testing template.

S.No.	Parameter	Values	Screenshot
1.	Model Summary	-	

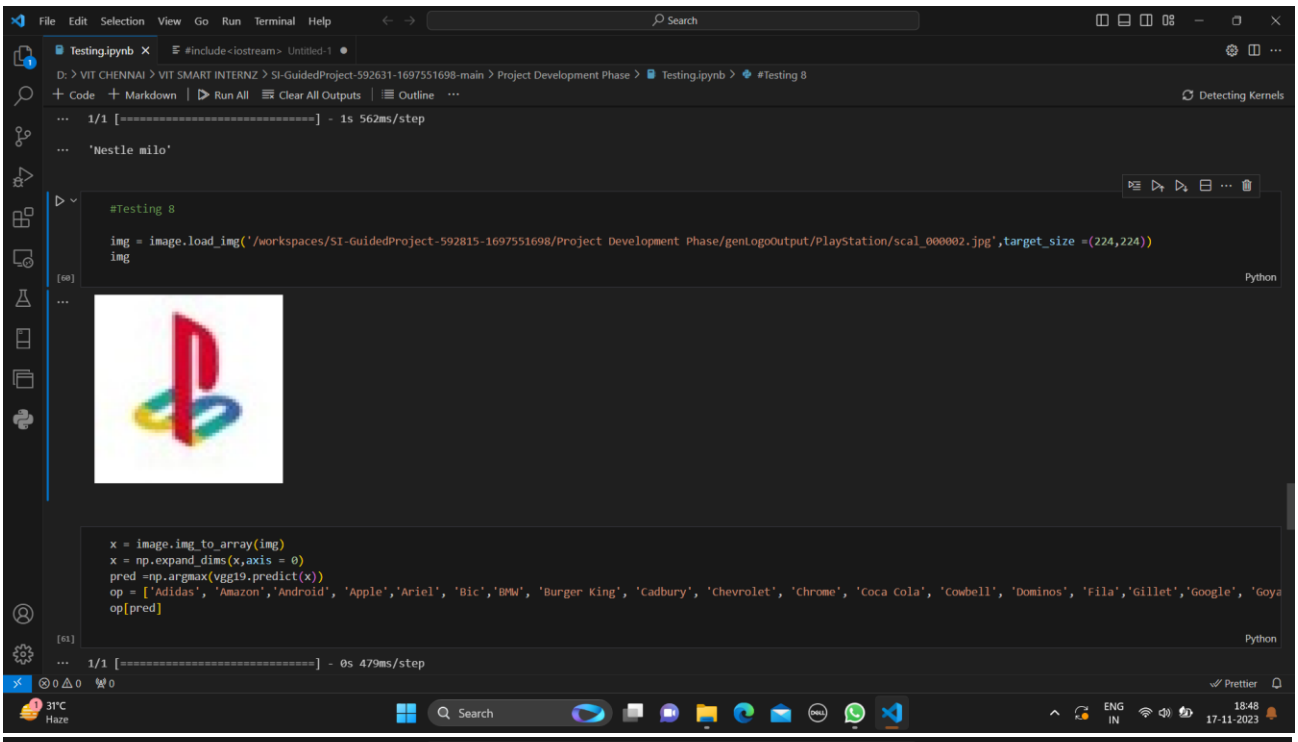
2.	Accuracy	Training Accuracy: 0.9673 (96.73%) Validation Accuracy: 0.9855 (98.55%)	
3.	Confidence Score (Only Yolo Projects)	Class Detected - Confidence Score -	

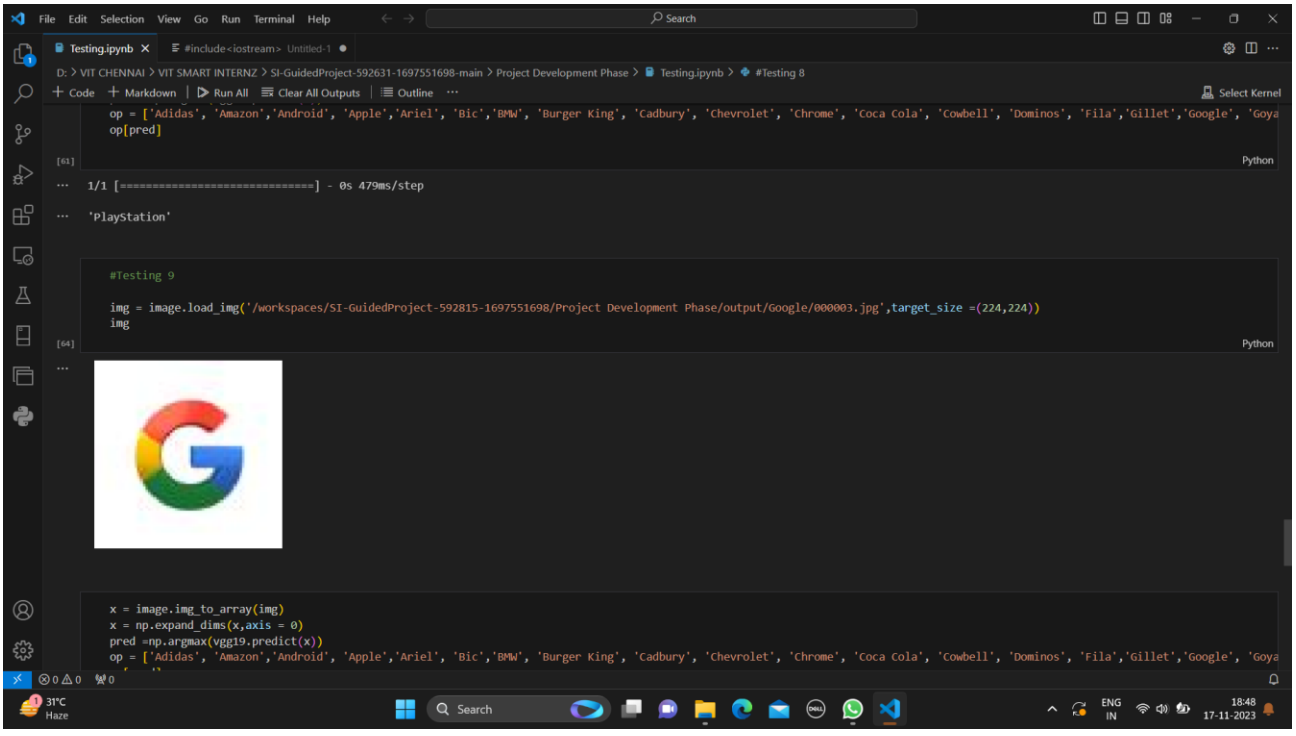
```
vgg19.fit(train,validation_data=test,epochs=20,steps_per_epoch=len(train),validation_steps =len(test))
```

```
Epoch 1/20
35/35 [==============================] - 8s 236ms/step - loss: 0.7242 - accuracy: 0.8091 - val_loss: 0.2182 - val_accuracy: 0.9418
Epoch 2/20
35/35 [==============================] - 9s 266ms/step - loss: 0.4618 - accuracy: 0.8745 - val_loss: 0.1238 - val_accuracy: 0.9636
Epoch 3/20
35/35 [==============================] - 9s 270ms/step - loss: 0.4733 - accuracy: 0.8782 - val_loss: 0.1443 - val_accuracy: 0.9564
Epoch 4/20
35/35 [==============================] - 9s 266ms/step - loss: 0.5275 - accuracy: 0.8618 - val_loss: 0.1007 - val_accuracy: 0.9745
Epoch 5/20
35/35 [==============================] - 9s 272ms/step - loss: 0.4143 - accuracy: 0.8855 - val_loss: 0.1534 - val_accuracy: 0.9564
Epoch 6/20
35/35 [==============================] - 9s 251ms/step - loss: 0.4899 - accuracy: 0.8527 - val_loss: 0.0560 - val_accuracy: 0.9855
Epoch 7/20
35/35 [==============================] - 9s 240ms/step - loss: 0.4434 - accuracy: 0.8745 - val_loss: 0.0661 - val_accuracy: 0.9673
Epoch 8/20
35/35 [==============================] - 9s 264ms/step - loss: 0.4126 - accuracy: 0.8673 - val_loss: 0.0501 - val_accuracy: 0.9891
Epoch 9/20
35/35 [==============================] - 9s 266ms/step - loss: 0.2838 - accuracy: 0.9127 - val_loss: 0.0580 - val_accuracy: 0.9782
Epoch 10/20
35/35 [==============================] - 9s 266ms/step - loss: 0.2414 - accuracy: 0.9291 - val_loss: 0.1120 - val_accuracy: 0.9636
Epoch 11/20
35/35 [==============================] - 8s 233ms/step - loss: 0.3988 - accuracy: 0.8691 - val_loss: 0.0418 - val_accuracy: 0.9818
Epoch 12/20
35/35 [==============================] - 9s 254ms/step - loss: 0.2549 - accuracy: 0.9236 - val_loss: 0.0262 - val_accuracy: 0.9927
Epoch 13/20
35/35 [==============================] - 9s 265ms/step - loss: 0.2500 - accuracy: 0.9327 - val_loss: 0.0166 - val_accuracy: 0.9964
Epoch 14/20
35/35 [==============================] - 9s 251ms/step - loss: 0.2437 - accuracy: 0.9327 - val_loss: 0.0276 - val_accuracy: 0.9891
Epoch 15/20
35/35 [==============================] - 9s 264ms/step - loss: 0.1914 - accuracy: 0.9491 - val_loss: 0.0139 - val_accuracy: 0.9964
Epoch 16/20
35/35 [==============================] - 8s 235ms/step - loss: 0.1633 - accuracy: 0.9582 - val_loss: 0.0270 - val_accuracy: 0.9891
Epoch 17/20
35/35 [==============================] - 9s 262ms/step - loss: 0.2111 - accuracy: 0.9327 - val_loss: 0.0122 - val_accuracy: 1.0000
Epoch 18/20
35/35 [==============================] - 9s 263ms/step - loss: 0.2125 - accuracy: 0.9418 - val_loss: 0.0174 - val_accuracy: 0.9964
Epoch 19/20
35/35 [==============================] - 8s 236ms/step - loss: 0.0939 - accuracy: 0.9691 - val_loss: 0.0067 - val_accuracy: 1.0000
Epoch 20/20
35/35 [==============================] - 9s 248ms/step - loss: 0.1283 - accuracy: 0.9673 - val_loss: 0.0388 - val_accuracy: 0.9855

<keras.src.callbacks.History at 0x79df912f1b70>
```

SCREENSHOTS:


File Edit Selection View Go Run Terminal Help
Search
Testing.ipynb
#include<iostream> Untitled-1
D: > VIT CHENNAI > VIT SMART INTERNZ > SI-GuidedProject-592631-1697551698-main > Project Development Phase > Testing.ipynb > #Testing 8
Code Markdown Run All Clear All Outputs Outline
Detecting Kernels
1/1 [==============================] - 1s 562ms/step
'Nestle milo'
#Testing 8
img = image.load_img('/workspaces/SI-GuidedProject-592815-1697551698/Project Development Phase/genLogoOutput/PlayStation/scal_000002.jpg',target_size =(224,224))
img
[60]
Python
x = image.img_to_array(img)
x = np.expand_dims(x,axis = 0)
pred =np.argmax(vgg19.predict(x))
op = ['Adidas', 'Amazon','Android', 'Apple','Ariel', 'Bic','BMW', 'Burger King', 'Cadbury', 'Chevrolet', 'Chrome', 'Coca Cola', 'Cowbell', 'Dominos', 'Fila','Gillet','Google', 'Goya
op[pred]
[61]
Python
1/1 [==============================] - 0s 479ms/step
Prettier
31°C Haze
Search
ENG IN
18:48 17-11-2023


File Edit Selection View Go Run Terminal Help
Search
Testing.ipynb
#include<iostream> Untitled-1
D: > VIT CHENNAI > VIT SMART INTERNZ > SI-GuidedProject-592631-1697551698-main > Project Development Phase > Testing.ipynb > #Testing 8
Code Markdown Run All Clear All Outputs Outline
Select Kernel
op = ['Adidas', 'Amazon','Android', 'Apple','Ariel', 'Bic','BMW', 'Burger King', 'Cadbury', 'Chevrolet', 'Chrome', 'Coca Cola', 'Cowbell', 'Dominos', 'Fila','Gillet','Google', 'Goya
op[pred]
[61]
Python
1/1 [==============================] - 0s 479ms/step
'PlayStation'
#Testing 9
img = image.load_img('/workspaces/SI-GuidedProject-592815-1697551698/Project Development Phase/output/Google/000003.jpg',target_size =(224,224))
img
[64]
Python
x = image.img_to_array(img)
x = np.expand_dims(x,axis = 0)
pred =np.argmax(vgg19.predict(x))
op = ['Adidas', 'Amazon','Android', 'Apple','Ariel', 'Bic','BMW', 'Burger King', 'Cadbury', 'Chevrolet', 'Chrome', 'Coca Cola', 'Cowbell', 'Dominos', 'Fila','Gillet','Google', 'Goya
31°C Haze
Search
ENG IN
18:48 17-11-2023

```
pred =np.argmax(vgg19.predict(x))
op = ['Adidas', 'Amazon','Android', 'Apple','Ariel', 'Bic','BMW', 'Burger King', 'Cadbury', 'Chevrolet', 'Chrome', 'Coca Cola', 'Cowbell', 'Dominos', 'Fila','Gillet','Google', 'Goya
op[pred]
```

[63] Python

```
1/1 [==============================] - 1s 503ms/step
```

```
'Google'
```

```
#Testing 10

img = image.load_img('/workspaces/SI-GuidedProject-592815-1697551698/Project Development Phase/output/Burger King/000004.jpg',target_size =(224,224))
img
```

[65] Python


```
x = image.img_to_array(img)
x = np.expand_dims(x,axis = 0)
pred =np.argmax(vgg19.predict(x))
```

```
1/1 [==============================] - 0s 457ms/step
```

```
'YouTube'
```

```
#Testing 6

img = image.load_img('/workspaces/SI-GuidedProject-592815-1697551698/Project Development Phase/output/Sprite/000002.jpg',target_size =(224,224))
img
```

[56] Python


```
x = image.img_to_array(img)
x = np.expand_dims(x,axis = 0)
pred =np.argmax(vgg19.predict(x))
op = ['Adidas', 'Amazon','Android', 'Apple','Ariel', 'Bic','BMW', 'Burger King', 'Cadbury', 'Chevrolet', 'Chrome', 'Coca Cola', 'Cowbell', 'Dominos', 'Fila','Gillet','Google', 'Goya
op[pred]
```

[57] Python