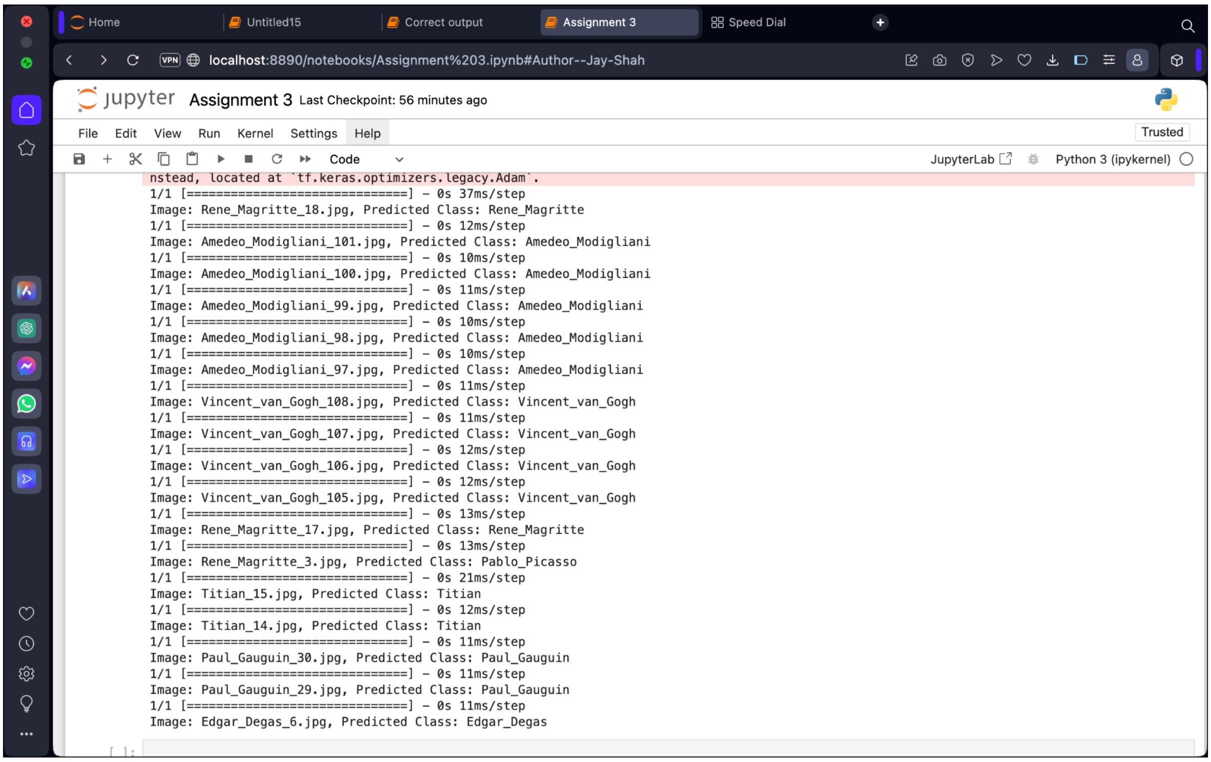
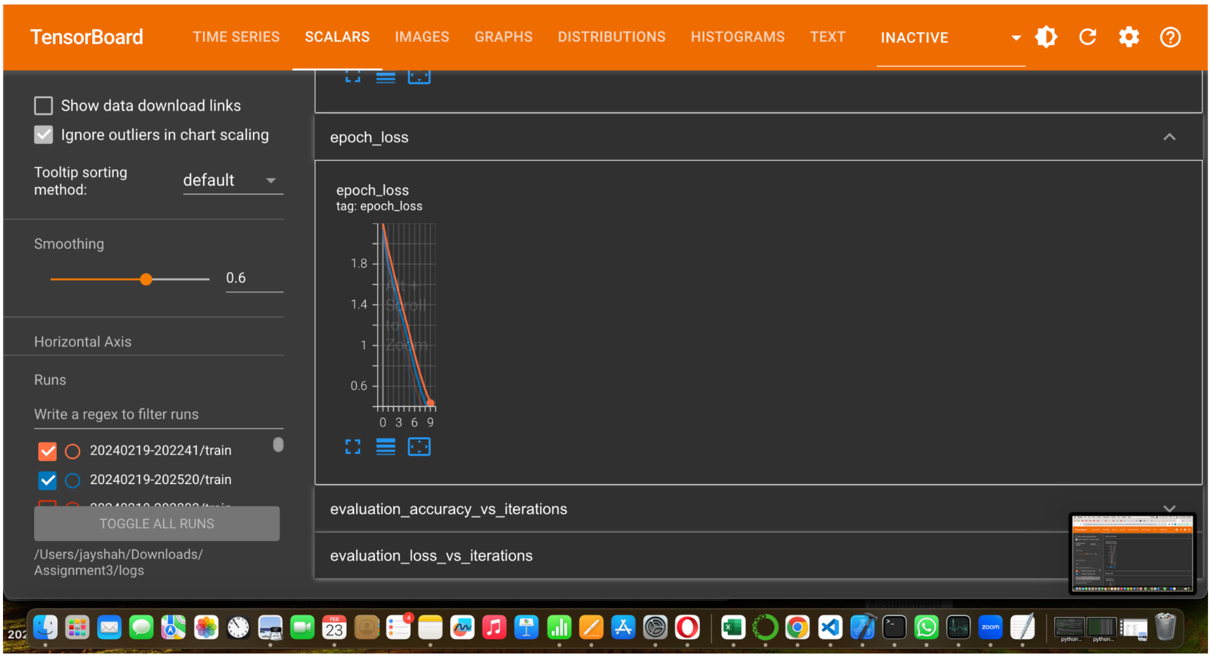
Description–

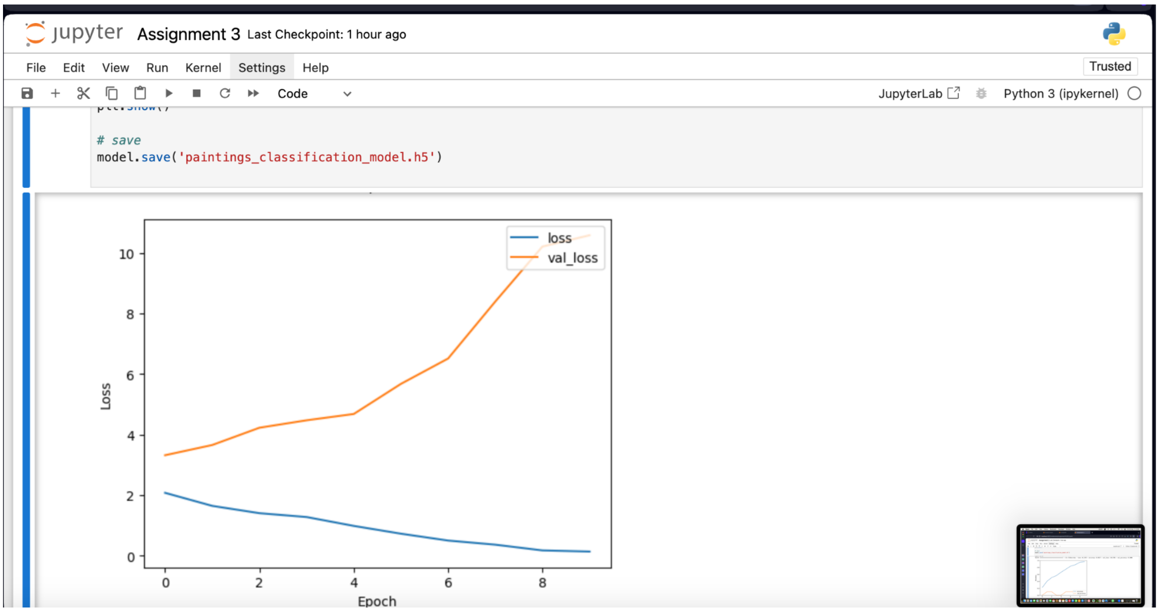
1) Image and Predicted Class
2)Epochs
3)Tensoboard


Home
Untitled15
Correct output
Assignment 3
Speed Dial
localhost:8890/notebooks/Assignment%203.ipynb#Author--Jay-Shah
jupyter
Assignment 3
Last Checkpoint: 56 minutes ago
File
Edit
View
Run
Kernel
Settings
Help
Trusted
Code
JupyterLab
Python 3 (ipykernel)

```
nstead, located at `tf.keras.optimizers.legacy.Adam`.
1/1 [==============================] - 0s 37ms/step
Image: Rene_Magritte_18.jpg, Predicted Class: Rene_Magritte
1/1 [==============================] - 0s 12ms/step
Image: Amedeo_Modigliani_101.jpg, Predicted Class: Amedeo_Modigliani
1/1 [==============================] - 0s 10ms/step
Image: Amedeo_Modigliani_100.jpg, Predicted Class: Amedeo_Modigliani
1/1 [==============================] - 0s 11ms/step
Image: Amedeo_Modigliani_99.jpg, Predicted Class: Amedeo_Modigliani
1/1 [==============================] - 0s 10ms/step
Image: Amedeo_Modigliani_98.jpg, Predicted Class: Amedeo_Modigliani
1/1 [==============================] - 0s 10ms/step
Image: Amedeo_Modigliani_97.jpg, Predicted Class: Amedeo_Modigliani
1/1 [==============================] - 0s 11ms/step
Image: Vincent_van_Gogh_108.jpg, Predicted Class: Vincent_van_Gogh
1/1 [==============================] - 0s 11ms/step
Image: Vincent_van_Gogh_107.jpg, Predicted Class: Vincent_van_Gogh
1/1 [==============================] - 0s 12ms/step
Image: Vincent_van_Gogh_106.jpg, Predicted Class: Vincent_van_Gogh
1/1 [==============================] - 0s 12ms/step
Image: Vincent_van_Gogh_105.jpg, Predicted Class: Vincent_van_Gogh
1/1 [==============================] - 0s 13ms/step
Image: Rene_Magritte_17.jpg, Predicted Class: Rene_Magritte
1/1 [==============================] - 0s 13ms/step
Image: Rene_Magritte_3.jpg, Predicted Class: Pablo_Picasso
1/1 [==============================] - 0s 21ms/step
Image: Titian_15.jpg, Predicted Class: Titian
1/1 [==============================] - 0s 12ms/step
Image: Titian_14.jpg, Predicted Class: Titian
1/1 [==============================] - 0s 11ms/step
Image: Paul_Gauguin_30.jpg, Predicted Class: Paul_Gauguin
1/1 [==============================] - 0s 11ms/step
Image: Paul_Gauguin_29.jpg, Predicted Class: Paul_Gauguin
1/1 [==============================] - 0s 11ms/step
Image: Edgar_Degas_6.jpg, Predicted Class: Edgar_Degas
```

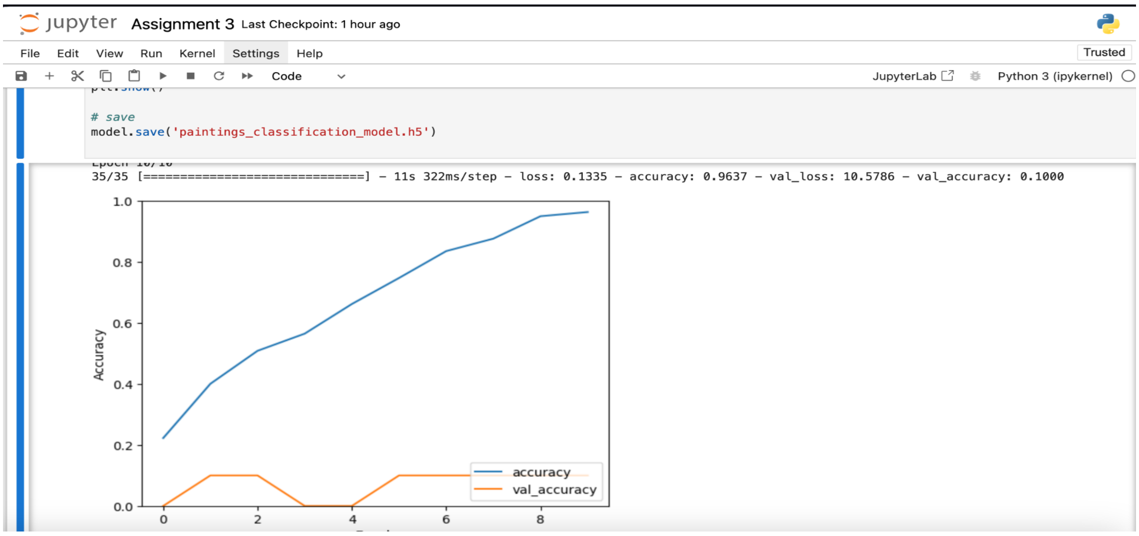

TensorBoard
TIME SERIES
SCALARS
IMAGES
GRAPHS
DISTRIBUTIONS
HISTOGRAMS
TEXT
INACTIVE
epoch_loss
epoch_loss
tag: epoch_loss
1.8
1.4
1
0.6
0
3
6
9
evaluation_accuracy_vs_iterations
evaluation_loss_vs_iterations
TOGGLE ALL RUNS

☐ Show data download links
☑ Ignore outliers in chart scaling
Tooltip sorting method: default
Smoothing: 0.6
Horizontal Axis
Runs
Write a regex to filter runs
☑ 20240219-202241/train
☑ 20240219-202520/train
/Users/jayshah/Downloads/Assignment3/logs


jupyter
Assignment 3
Last Checkpoint: 1 hour ago
File
Edit
View
Run
Kernel
Settings
Help
Trusted
Code
JupyterLab
Python 3 (ipykernel)
loss
val_loss
10
8
6
4
2
0
Loss
0
2
4
6
8
Epoch

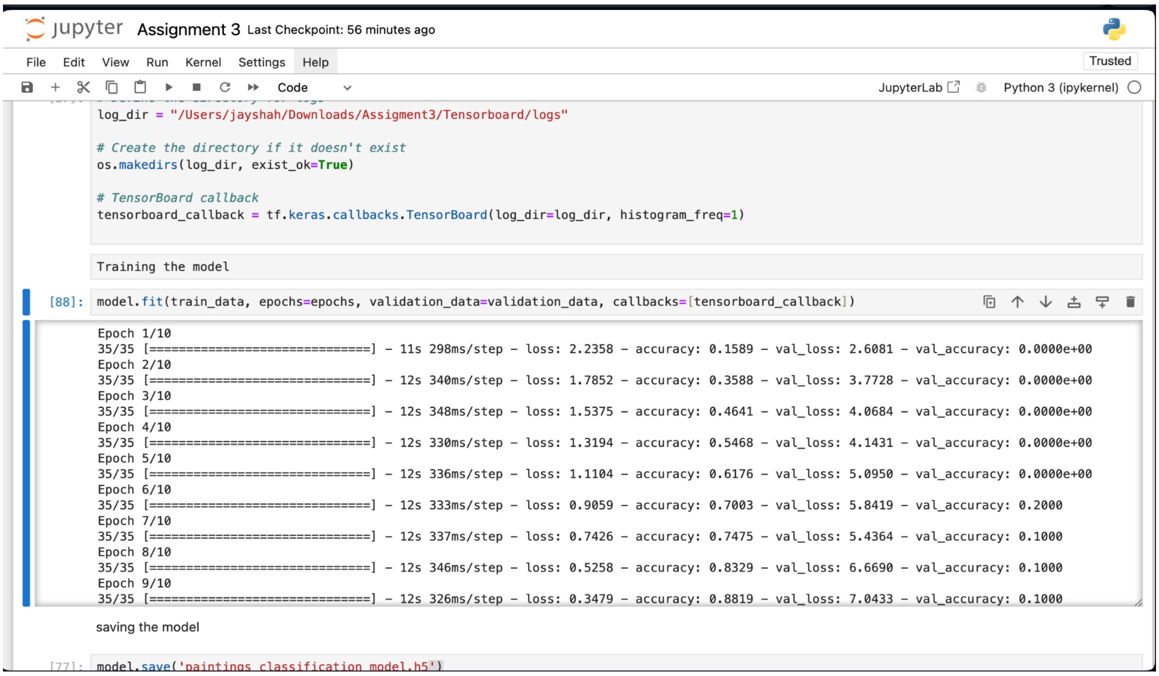
```
plt.show()

# save
model.save('paintings_classification_model.h5')
```


jupyter
Assignment 3 Last Checkpoint: 1 hour ago
File
Edit
View
Run
Kernel
Settings
Help
Trusted
Code
JupyterLab
Python 3 (ipykernel)
1.0
0.8
0.6
0.4
0.2
0.0
Accuracy
0
2
4
6
8
accuracy
val_accuracy

```
# save
model.save('paintings_classification_model.h5')
```

```
35/35 [==============================] - 11s 322ms/step - loss: 0.1335 - accuracy: 0.9637 - val_loss: 10.5786 - val_accuracy: 0.1000
```


jupyter
Assignment 3 Last Checkpoint: 56 minutes ago
File
Edit
View
Run
Kernel
Settings
Help
Trusted
Code
JupyterLab
Python 3 (ipykernel)

```
log_dir = "/Users/jayshah/Downloads/Assigment3/Tensorboard/logs"

# Create the directory if it doesn't exist
os.makedirs(log_dir, exist_ok=True)

# TensorBoard callback
tensorboard_callback = tf.keras.callbacks.TensorBoard(log_dir=log_dir, histogram_freq=1)
```

Training the model

```
[88]: model.fit(train_data, epochs=epochs, validation_data=validation_data, callbacks=[tensorboard_callback])
```

```
Epoch 1/10
35/35 [==============================] - 11s 298ms/step - loss: 2.2358 - accuracy: 0.1589 - val_loss: 2.6081 - val_accuracy: 0.0000e+00
Epoch 2/10
35/35 [==============================] - 12s 340ms/step - loss: 1.7852 - accuracy: 0.3588 - val_loss: 3.7728 - val_accuracy: 0.0000e+00
Epoch 3/10
35/35 [==============================] - 12s 348ms/step - loss: 1.5375 - accuracy: 0.4641 - val_loss: 4.0684 - val_accuracy: 0.0000e+00
Epoch 4/10
35/35 [==============================] - 12s 330ms/step - loss: 1.3194 - accuracy: 0.5468 - val_loss: 4.1431 - val_accuracy: 0.0000e+00
Epoch 5/10
35/35 [==============================] - 12s 336ms/step - loss: 1.1104 - accuracy: 0.6176 - val_loss: 5.0950 - val_accuracy: 0.0000e+00
Epoch 6/10
35/35 [==============================] - 12s 333ms/step - loss: 0.9059 - accuracy: 0.7003 - val_loss: 5.8419 - val_accuracy: 0.2000
Epoch 7/10
35/35 [==============================] - 12s 337ms/step - loss: 0.7426 - accuracy: 0.7475 - val_loss: 5.4364 - val_accuracy: 0.1000
Epoch 8/10
35/35 [==============================] - 12s 346ms/step - loss: 0.5258 - accuracy: 0.8329 - val_loss: 6.6690 - val_accuracy: 0.1000
Epoch 9/10
35/35 [==============================] - 12s 326ms/step - loss: 0.3479 - accuracy: 0.8819 - val_loss: 7.0433 - val_accuracy: 0.1000
```

saving the model

```
[77]: model.save('paintings_classification_model.h5')
```