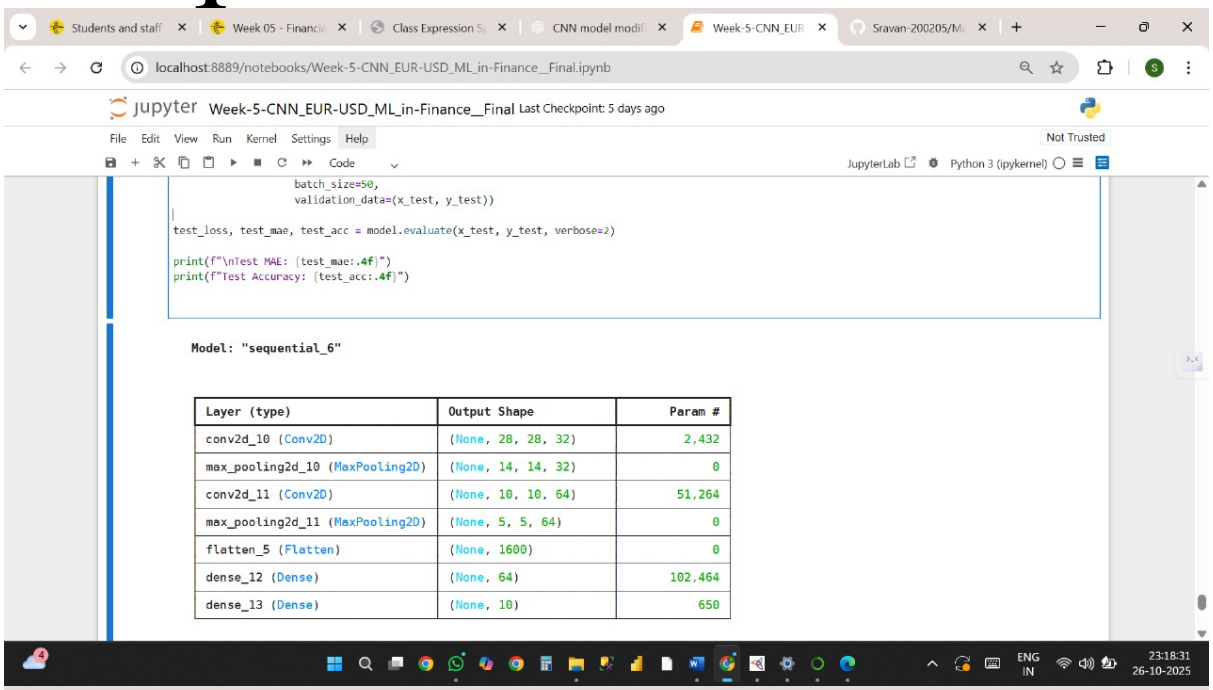
Week-5
Output



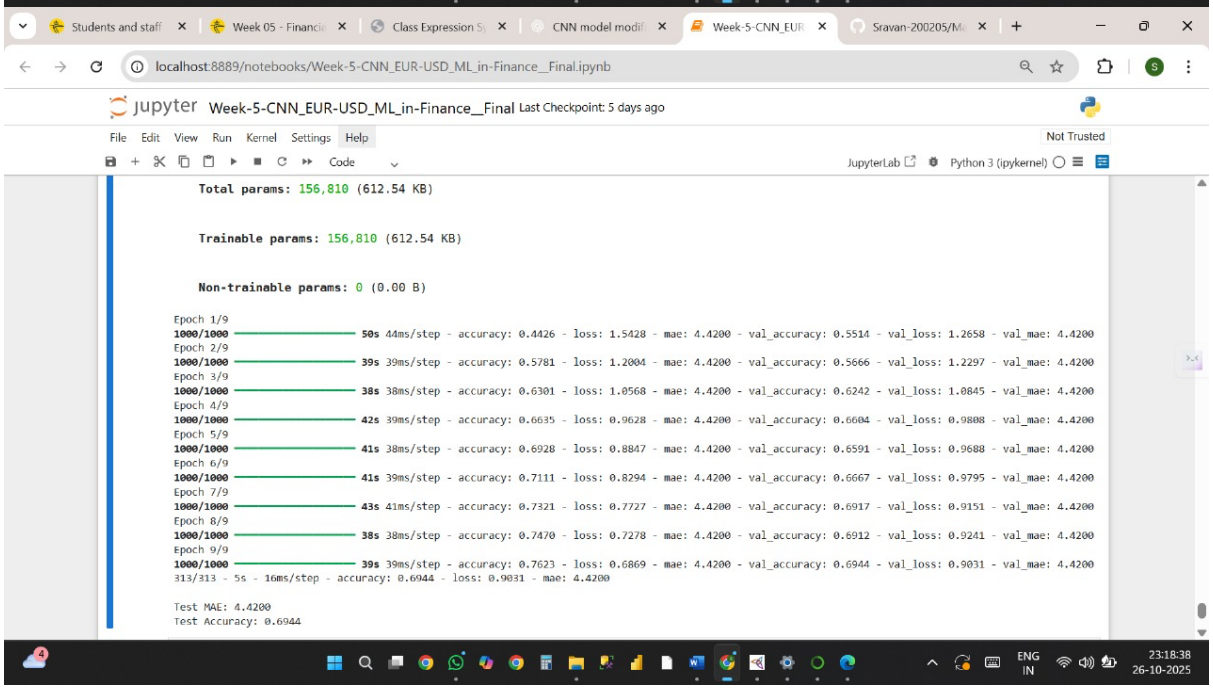
```
                    batch_size=50,
                    validation_data=(x_test, y_test))

test_loss, test_mae, test_acc = model.evaluate(x_test, y_test, verbose=2)

print(f"\nTest MAE: {test_mae:.4f}")
print(f"Test Accuracy: {test_acc:.4f}")
```

Model: "sequential_6"

Layer (type)	Output Shape	Param #
conv2d_10 (Conv2D)	(None, 28, 28, 32)	2,432
max_pooling2d_10 (MaxPooling2D)	(None, 14, 14, 32)	0
conv2d_11 (Conv2D)	(None, 10, 10, 64)	51,264
max_pooling2d_11 (MaxPooling2D)	(None, 5, 5, 64)	0
flatten_5 (Flatten)	(None, 1600)	0
dense_12 (Dense)	(None, 64)	102,464
dense_13 (Dense)	(None, 10)	650



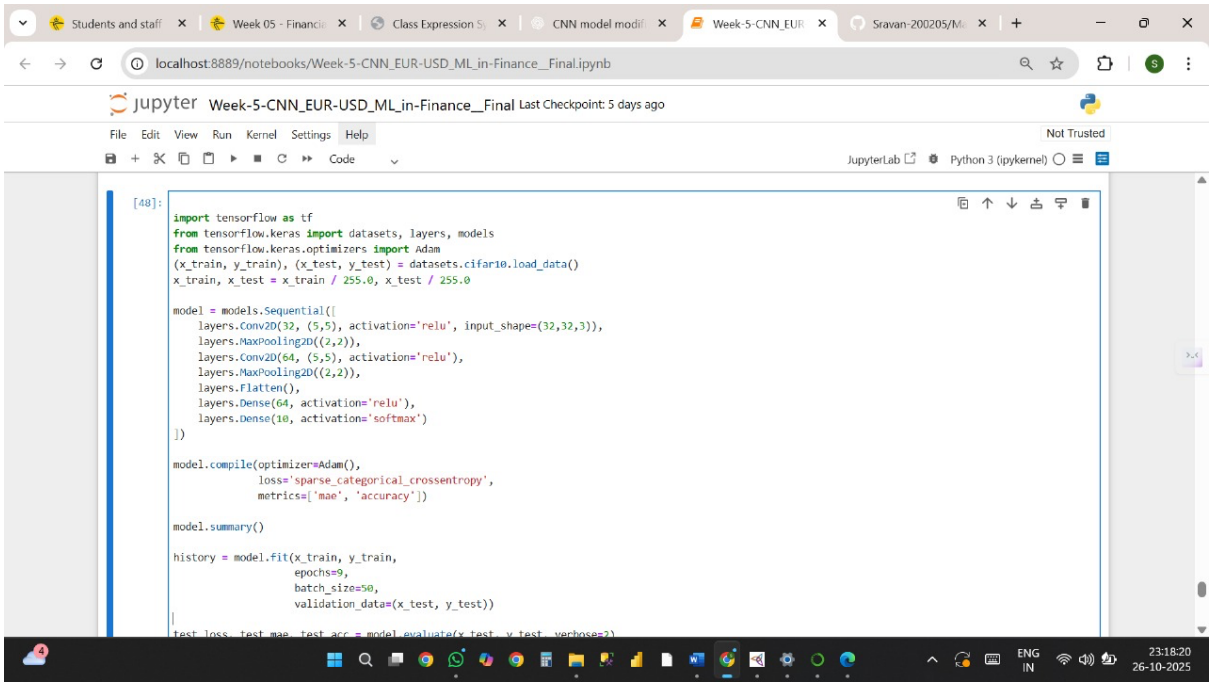
Total params: 156,810 (612.54 KB)

Trainable params: 156,810 (612.54 KB)

Non-trainable params: 0 (0.00 B)

```
Epoch 1/9
1000/1000 ━━━━━━━━━━━━━━━━━━━━ 50s 44ms/step - accuracy: 0.4426 - loss: 1.5428 - mae: 4.4200 - val_accuracy: 0.5514 - val_loss: 1.2658 - val_mae: 4.4200
Epoch 2/9
1000/1000 ━━━━━━━━━━━━━━━━━━━━ 39s 39ms/step - accuracy: 0.5781 - loss: 1.2004 - mae: 4.4200 - val_accuracy: 0.5666 - val_loss: 1.2297 - val_mae: 4.4200
Epoch 3/9
1000/1000 ━━━━━━━━━━━━━━━━━━━━ 38s 38ms/step - accuracy: 0.6301 - loss: 1.0568 - mae: 4.4200 - val_accuracy: 0.6242 - val_loss: 1.0845 - val_mae: 4.4200
Epoch 4/9
1000/1000 ━━━━━━━━━━━━━━━━━━━━ 42s 39ms/step - accuracy: 0.6635 - loss: 0.9628 - mae: 4.4200 - val_accuracy: 0.6604 - val_loss: 0.9808 - val_mae: 4.4200
Epoch 5/9
1000/1000 ━━━━━━━━━━━━━━━━━━━━ 41s 38ms/step - accuracy: 0.6928 - loss: 0.8847 - mae: 4.4200 - val_accuracy: 0.6591 - val_loss: 0.9688 - val_mae: 4.4200
Epoch 6/9
1000/1000 ━━━━━━━━━━━━━━━━━━━━ 41s 39ms/step - accuracy: 0.7111 - loss: 0.8294 - mae: 4.4200 - val_accuracy: 0.6667 - val_loss: 0.9795 - val_mae: 4.4200
Epoch 7/9
1000/1000 ━━━━━━━━━━━━━━━━━━━━ 43s 41ms/step - accuracy: 0.7321 - loss: 0.7727 - mae: 4.4200 - val_accuracy: 0.6917 - val_loss: 0.9151 - val_mae: 4.4200
Epoch 8/9
1000/1000 ━━━━━━━━━━━━━━━━━━━━ 38s 38ms/step - accuracy: 0.7470 - loss: 0.7278 - mae: 4.4200 - val_accuracy: 0.6912 - val_loss: 0.9241 - val_mae: 4.4200
Epoch 9/9
1000/1000 ━━━━━━━━━━━━━━━━━━━━ 39s 39ms/step - accuracy: 0.7623 - loss: 0.6869 - mae: 4.4200 - val_accuracy: 0.6944 - val_loss: 0.9031 - val_mae: 4.4200
313/313 - 5s - 16ms/step - accuracy: 0.6944 - loss: 0.9031 - mae: 4.4200

Test MAE: 4.4200
Test Accuracy: 0.6944
```


Students and staff
Week 05 - Financia
Class Expression Sy
CNN model modifi
Week-5-CNN_EUR
Sravan-200205/Ma
localhost:8889/notebooks/Week-5-CNN_EUR-USD_ML_in-Finance__Final.ipynb
jupyter Week-5-CNN_EUR-USD_ML_in-Finance__Final Last Checkpoint: 5 days ago
File Edit View Run Kernel Settings Help
Not Trusted
Code
JupyterLab
Python 3 (ipykernel)
[48]:
import tensorflow as tf
from tensorflow.keras import datasets, layers, models
from tensorflow.keras.optimizers import Adam
(x_train, y_train), (x_test, y_test) = datasets.cifar10.load_data()
x_train, x_test = x_train / 255.0, x_test / 255.0
model = models.Sequential([
layers.Conv2D(32, (5,5), activation='relu', input_shape=(32,32,3)),
layers.MaxPooling2D((2,2)),
layers.Conv2D(64, (5,5), activation='relu'),
layers.MaxPooling2D((2,2)),
layers.Flatten(),
layers.Dense(64, activation='relu'),
layers.Dense(10, activation='softmax')
])
model.compile(optimizer=Adam(),
loss='sparse_categorical_crossentropy',
metrics=['mae', 'accuracy'])
model.summary()
history = model.fit(x_train, y_train,
epochs=9,
batch_size=50,
validation_data=(x_test, y_test))
test_loss, test_mae, test_acc = model.evaluate(x_test, y_test, verbose=2)
ENG
IN
23:18:20
26-10-2025