Quiz: Deep Learning with Python

Due Feb 17 at 3:30pm **Points** 7 **Questions** 2 **Time Limit** None

Instructions

This exercise is a continuation of the quiz "OLS with Python". Make sure that you complete that quiz first correctly. Then follow the instructions in the document Fintech___Fracassi___Assignment___Deep_Learning_with_Python.pdf (https://app.box.com/embed_widget/s/usln2ls5oglr0beqwcxp6kppux5aamxu?view=list&sort=name&direction=ASC&theme=dark) , and finally answer the questions below.

This is an individual exercise, and has no time limit.

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	9 minutes	5 out of 7 *

* Some questions not yet graded

Score for this quiz: **5** out of 7 *
Submitted Feb 8 at 11:39am
This attempt took 9 minutes.

Question 1

5 / 5 pts

What is the mean squared error of the deep learning model?

Correct!

● 0.8260754410623826

○ 0.8660754410623826

○ 0.8060754410623826

○ 0.8460754410623826

Question 2

Not yet graded / 2 pts

Copy and paste the code below.

Your Answer:

```
# # OLS
#

# In[155]:


import pandas as pd
import numpy as np
from sklearn.datasets import make_classification
from sklearn.linear_model import LinearRegression
from sklearn.linear_model import LogisticRegression
from sklearn.metrics import mean_squared_error
import math
from matplotlib import pyplot
import os
import statsmodels.api as sm


# In[156]:


df=pd.read_csv('Stock Return Data.csv')
df.columns


# In[157]:


df.head()


# In[158]:


df['Mkt_rf_lead'] = df['Mkt_rf'].shift(-1)
df['Mkt_rf_lead']
```

```
# In[159]:


#df['Mkt_rf_lead'].dropna(how='any', inplace=True)
df.dropna(how='any', inplace=True)
df


# In[160]:


X = np.asarray(df.drop(['Date','Mkt_rf','Mkt_rf_lead'],axis=1))
y = np.asarray(df['Mkt_rf_lead'])


# Create linear regression object
reg = linear_model.LinearRegression()
# Train the model using the training sets
reg.fit(X, y)

# Make predictions using the testing set
pred_x = reg.predict(X)

# The mean absolute error

MSE = mean_squared_error(y, pred_x, squared=True)
RMSE = mean_squared_error(y, pred_x, squared=False)
print(MSE)
print(RMSE)


# # Deep Learning
#

# In[162]:


from sklearn.neural_network import MLPRegressor


# In[164]:


X = np.asarray(df.drop(['Date','Mkt_rf','Mkt_rf_lead'],axis=1))
y = np.asarray(df['Mkt_rf_lead'])
```

```
# In[165]:


neuro =
MLPRegressor(random_state=42,solver='sgd',max_iter=10000,activation=
'relu',hidden_layer_sizes=(20, 10, 3))
neuro.fit(X,y)
pred_x = neuro.predict(X)
MSE = mean_squared_error(y, pred_x, squared=True)
RMSE = mean_squared_error(y, pred_x, squared=False)
print(MSE)
print(RMSE)
```

Quiz Score: **5** out of 7