**Machine Learning In Finance**

**Lablog book week 4:**

import tensorflow as tf

from tensorflow import keras

from tensorflow.keras.models import Sequential

from tensorflow.keras.layers import Dense

# Make sure your datasets are already loaded and preprocessed:

# x\_train, y\_train, x\_test, y\_test

# Define the MLP model with two hidden layers

model = Sequential([

Dense(77, input\_dim=x\_train.shape[1], activation='relu', kernel\_initializer='normal'),

Dense(38, activation='relu', kernel\_initializer='normal'),

Dense(1)

])

# Compile the model (same parameters as practical session)

model.compile(optimizer='adam', loss='mse', metrics=['mae'])

# Print the architecture

print("MLP Architecture:")

model.summary()

# Train the model

history = model.fit(

x\_train, y\_train,

batch\_size=10,

epochs=10,

validation\_split=0.2,

verbose=1

)

# Evaluate on test set

test\_loss, test\_mae = model.evaluate(x\_test, y\_test)

print(f"Test MAE: {test\_mae:.4f}")



