

# TUGAS PERTEMUAN 12 MACHINE LEARNING

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## 1. TAHAP 1

```

[2] import pandas as pd

[24] emas = pd.read_csv('FINAL_USO.csv')
      emas = emas.rename(columns={'Close': 'Price'})

      emas['DayOfWeek'] = pd.to_datetime(emas['Date']).dt.dayofweek

      data = emas[['Open', 'High', 'Low', 'DayOfWeek', 'Price']]

      data = data.dropna()

      x = data[['Open', 'High', 'Low', 'DayOfWeek']].values
      y = data['Price'].values

      print(emas)

```

	Date	Open	High	Low	Price	Adj Close
0	2011-12-15	154.740005	154.949997	151.710007	152.330002	152.330002
1	2011-12-16	154.309998	155.369995	153.899994	155.229996	155.229996
2	2011-12-19	155.479996	155.800001	154.360001	154.609995	154.609995
3	2011-12-20	156.820007	157.429993	156.580002	156.979996	156.979996
4	2011-12-21	156.979996	157.529999	156.130005	157.160004	157.160004
...	...	...	...	...	...	...
1713	2018-12-24	119.570000	120.139999	119.570000	120.019997	120.019997
1714	2018-12-26	120.620003	121.000000	119.570000	119.660004	119.660004
1715	2018-12-27	120.570000	120.000002	120.139999	120.570000	120.570000
1716	2018-12-28	120.800003	121.000002	120.720001	121.059998	121.059998
1717	2018-12-31	120.900001	121.260002	120.830002	121.250000	121.250000
...	...	...	...	...	...	...
	Volume	SP_open	SP_high	SP_low	GDx	Close
0	21521000	122.429999	123.159997	121.909998	...	51.600000
1	18124300	122.230003	122.949997	121.300003	...	52.600000
2	12547200	122.059998	122.320000	120.429999	...	53.169998
3	9136300	122.180000	124.139999	120.370003	...	52.990002
4	11596100	123.930000	124.360001	122.750000	...	52.959999
...	...	...	...	...	...	...
1713	9734600	239.839993	240.839996	234.270004	...	21.890000
1714	8400000	237.830004	247.870003	233.750000	...	22.000000

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## 2. TAHAP 2

```

[25] data = pd.DataFrame(emas, columns=['Open', 'High', 'Low', 'Price'])

      x = data.iloc[:, 0:3].values
      y = data.iloc[:, -1].values

      print(x)
      print(y)

```

```

[26] from sklearn.model_selection import train_test_split

      x_train, x_test, y_train, y_test = train_test_split(x, y, test_size=0.2, random_state=0)

```

```

import tensorflow as tf

model = tf.keras.models.Sequential()

model.add(tf.keras.layers.Dense(units=3, activation='relu'))
model.add(tf.keras.layers.Dense(units=9, activation='relu'))
model.add(tf.keras.layers.Dense(units=1))
model.compile(loss='mean_squared_error', optimizer=tf.keras.optimizers.Adam(0.001))

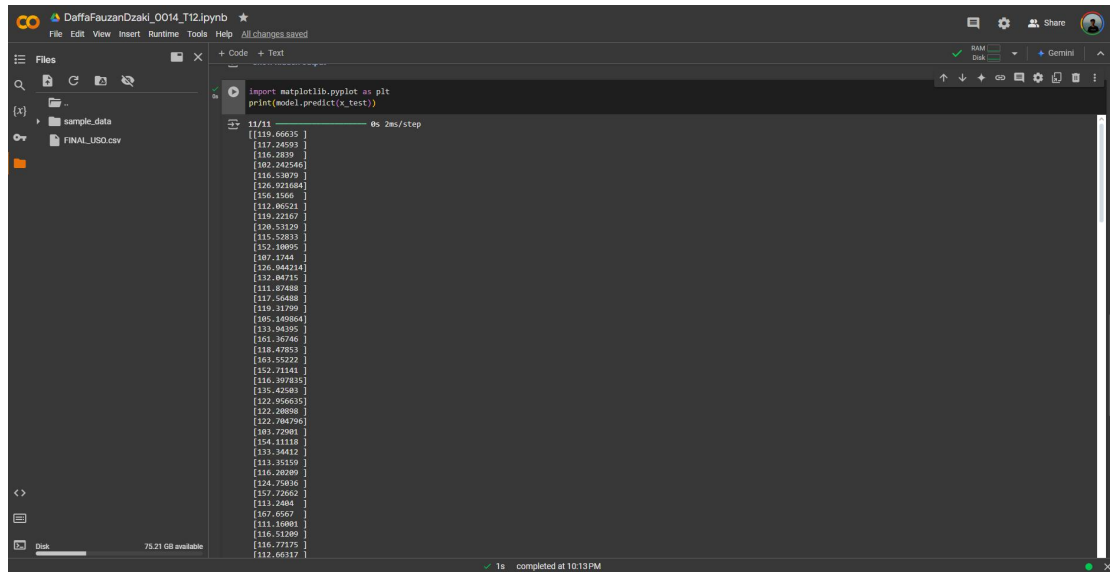
model.fit(x_train, y_train, epochs=800, batch_size=128)

```

Epoch	loss
Epoch 750/800	0.4608
Epoch 757/800	0.3407
Epoch 757/800	0.3374
Epoch 759/800	0.3576
Epoch 760/800	0.3091

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### 3. TAHAP 3



### 4. TAHAP 4

