



**UNIVERSIDAD
POLITÉCNICA
DE YUCATÁN**



Universidad Politécnica de Yucatán

Computational Robotics

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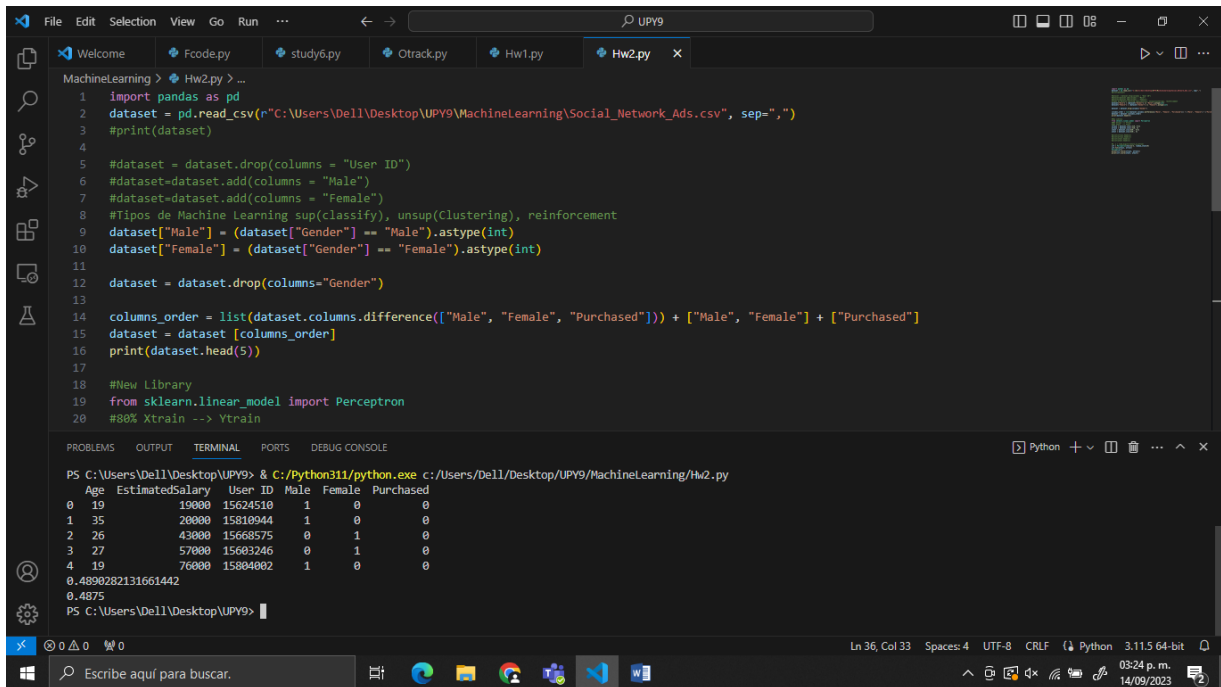
Fernando Alberto Loera Te

Quarter 9° A

14/09/2023

Machine Learning

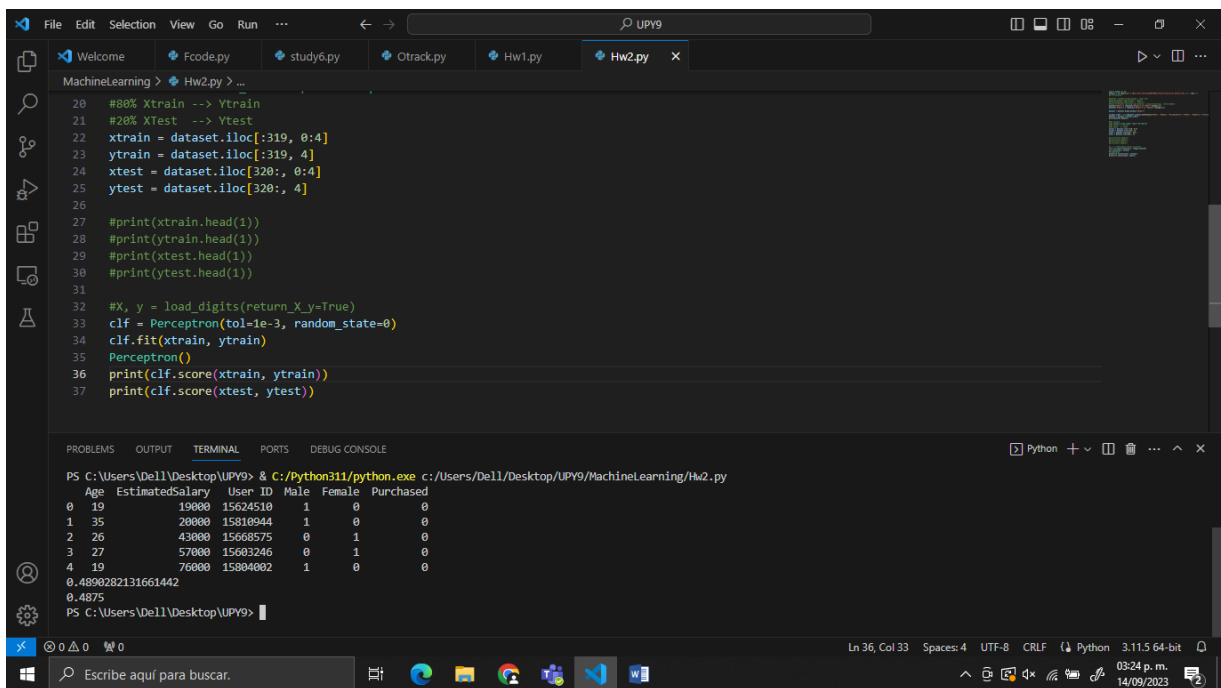
1st LU - Perceptron Model Training



```
MachineLearning > Hw2.py > ...
1 import pandas as pd
2 dataset = pd.read_csv(r"C:\Users\Del1\Desktop\UPY9\MachineLearning\Social_Network_Ads.csv", sep=",")
3 #print(dataset)
4
5 #dataset = dataset.drop(columns = "User ID")
6 #dataset=dataset.add(columns = "Male")
7 #dataset=dataset.add(columns = "Female")
8 #Tipos de Machine Learning sup(classify), unsup(Clustering), reinforcement
9 dataset["Male"] = (dataset["Gender"] == "Male").astype(int)
10 dataset["Female"] = (dataset["Gender"] == "Female").astype(int)
11
12 dataset = dataset.drop(columns="Gender")
13
14 columns_order = list(dataset.columns.difference(["Male", "Female", "Purchased"])) + ["Male", "Female"] + ["Purchased"]
15 dataset = dataset [columns_order]
16 print(dataset.head(5))
17
18 #New Library
19 from sklearn.linear_model import Perceptron
20 #80% Xtrain --> Ytrain
```

PROBLEMS OUTPUT TERMINAL PORTS DEBUG CONSOLE

```
PS C:\Users\Del1\Desktop\UPY9> & C:/Python311/python.exe c:/Users/Dell/Desktop/UPY9/MachineLearning/Hw2.py
Age EstimatedSalary User ID Male Female Purchased
0 19 19000 15624510 1 0 0
1 35 20000 15810944 1 0 0
2 26 43000 15668575 0 1 0
3 27 57000 15603246 0 1 0
4 19 76000 15804002 1 0 0
0.4890282131661442
0.4875
PS C:\Users\Del1\Desktop\UPY9>
```



```
MachineLearning > Hw2.py > ...
20 #80% Xtrain --> Ytrain
21 #20% Xtest --> Ytest
22 xtrain = dataset.iloc[:319, 0:4]
23 ytrain = dataset.iloc[:319, 4]
24 xtest = dataset.iloc[320:, 0:4]
25 ytest = dataset.iloc[320:, 4]
26
27 #print(xtrain.head(1))
28 #print(ytrain.head(1))
29 #print(xtest.head(1))
30 #print(ytest.head(1))
31
32 #X, y = load_digits(return_X_y=True)
33 clf = Perceptron(tol=1e-3, random_state=0)
34 clf.fit(xtrain, ytrain)
35 Perceptron()
36 print(clf.score(xtrain, ytrain))
37 print(clf.score(xtest, ytest))
```

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