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Matricula : 2019-8918

Materia: Inteligencia Artificial

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Regresion Lineal

https://colab.research.google.com/drive/1-PjryKlhVia_t7Pt0rpdJVuN4hq5BmAx?usp=sharing

```
import pandas as pd
import numpy as np
from sklearn.model_selection import train_test_split
from sklearn.linear_model import LogisticRegression
from sklearn import metrics
import matplotlib.pyplot as plt
```

```
url = "https://raw.githubusercontent.com/Statology/Python-Guides/main/default.csv"
data=pd.read_csv(url)
data.head(6)
```

	default	student	balance	income
0	0	0	729.526495	44361.625074
1	0	1	817.180407	12106.134700
2	0	0	1073.549164	31767.138947
3	0	0	529.250605	35704.493935
4	0	0	785.655883	38463.495879
5	0	1	919.588530	7491.558572

```
len(data.index)
```

```
10000
```

```
X = data[['student', 'balance', 'income']]
y = data['default']
```

```
#Reparte los datos 70% entrenamiento , 30% verificacion
X_train,X_test,y_train,y_test = train_test_split(X,y,test_size=0.3,random_state=0)
```

```
regs = LogisticRegression()
```

```
#Entrena al modelo
regs.fit(X_train,y_train)
```

```
LogisticRegression()
```

```
#Verifica el modelo
```

```
y_predict = regs.predict(X_test)
```

```
y_predict, len(y_predict)
```

```
(array([0, 0, 0, ..., 0, 0, 0]), 3000)
```

```
#Verifica los datos de confusion en la prediccion
```

```
cnf_matrix = metrics.confusion_matrix(y_test, y_predict)
```

```
cnf_matrix
```

```
array([[2870, 17],  
       [ 93, 20]])
```

```
#Notifica la precision
```

```
print("Accuracy:",metrics.accuracy_score(y_test, y_predict))
```

```
Accuracy: 0.9633333333333334
```

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