

Untitled5.ipynb - Colaboratorypython - name "Y" is not definedpandas - How do I define a python - How to resolve Attrpython - SyntaxError: "can't

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```
import pandas as pd
import numpy as np
import seaborn as sns
import matplotlib.pyplot as plt
from matplotlib import rcParams
from scipy import stats

[20] data=pd.read_csv(r'/content/indian_liver_patient.csv')

[ ] data.head()

Age Gender Total_Bilirubin Direct_Bilirubin Alkaline_Phosphotase Alamine_Aminc
0 65 Female 0.7 0.1 187
1 62 Male 10.9 5.5 699
2 62 Male 7.3 4.1 490
3 58 Male 1.0 0.4 182
4 72 Male 3.9 2.0 195

[ ] data.info()
```

indian\_liver\_patient.csv

62	Male	7.3	4.1	490
58	Male	1	0.4	182
72	Male	3.9	2	195
46	Male	1.8	0.7	208
26	Female	0.9	0.2	154
29	Female	0.9	0.3	202
17	Male	0.9	0.3	202
55	Male	0.7	0.2	290
57	Male	0.6	0.1	210
72	Male	2.7	1.3	260
64	Male	0.9	0.3	310
74	Female	1.1	0.4	214
61	Male	0.7	0.2	145
25	Male	0.6	0.1	183
38	Male	1.8	0.8	342
33	Male	1.6	0.5	165
40	Female	0.9	0.3	293
40	Female	0.9	0.3	293
51	Male	2.2	1	610
51	Male	2.9	1.3	482
62	Male	6.8	3	542
40	Male	1.9	1	231
63	Male	0.9	0.2	194
34	Male	4.1	2	289

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Alamine\_Aminotransterasefalse

Aspartate\_Aminotransterasefalse

Total\_Protiensfalse

Albuminfalse

Albumin\_and\_Globulin\_RatioTrue

Datasetfalse

dtype: bool

✓ [24] data.isnull().sum()

✓ [29] data['Albumin\_and\_Globulin\_Ratio'] = data.fillna(data['Albumin\_and\_Globulin\_Ratio'].data.isnull().sum())

✓ [35] from sklearn.preprocessing import LabelEncoder  
lc = LabelEncoder()  
data['Gender']=lc.fit\_transform(data['Gender'])

✓ [14] data.describe()

✓ [13] sns.displot(data['age'])  
plt.title('Age Distribution Graph')  
plt.show()

✓ [ ] sns.countplot(data['outcome'], hue=data['gender'])

indian\_liver\_patient.csv

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```
[38] from sklearn.preprocessing import scale
X_scaled=pd.DataFrame (scale(X), columns=X.columns)

[39] X_scaled.head()
```

	Age	Gender	Total_Bilirubin	Direct_Bilirubin	Alkaline_Phosphotase	Alamin
0	1.252098	-1.762281	-0.418878	-0.493964	-0.426715	
1	1.066637	0.567446	1.225171	1.430423	1.682629	
2	1.066637	0.567446	0.644919	0.931508	0.821588	
3	0.819356	0.567446	-0.370523	-0.387054	-0.447314	
4	1.684839	0.567446	0.096902	0.183135	-0.393756	

```
X=data.iloc[:, :-1]
y=data.outcome

from sklearn.model_selection import train_test_split
X_train,X_test,y_train,y_test=train_test_split(X_scaled,y, test_size=0.2, random_state=)
```

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```
from sklearn.model_selection import train_test_split
X_train,X_test,y_train,y_test=train_test_split(X_scaled,y, test_size=0.2, random sta

[3] pip install imblearn

Looking in indexes: https://pypi.org/simple, https://us-python.pkg.dev/colab-wheels/p
Requirement already satisfied: imblearn in /usr/local/lib/python3.9/dist-packages (0.6
Requirement already satisfied: scikit-learn>=1.0.2 in /usr/local/lib/python3.9/dist-pa
Requirement already satisfied: threadpoolctl>=2.0.0 in /usr/local/lib/python3.9/dist-p
Requirement already satisfied: scipy>=1.3.2 in /usr/local/lib/python3.9/dist-package
Requirement already satisfied: numpy>=1.17.3 in /usr/local/lib/python3.9/dist-package
Requirement already satisfied: joblib>=1.1.1 in /usr/local/lib/python3.9/dist-package:

[50] from imblearn.over_sampling import SMOTE
smote = SMOTE()

y_train.value_counts()

[59] X_train_SMOTE,y_train_SMOTE = SMOTE.fit_resample(X_train,y_train)

[61] y_train_SMOTE.value_counts()
```

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