

```
] from sklearn.preprocessing import LabelEncoder # label encoder
```

```
labelencoder_df = LabelEncoder()
```

```
df.iloc[:,4] = labelencoder_df.fit_transform(df.iloc[:,4])
```

```
#df[df.columns[5]] = labelencoder_df.fit_transform(df[df.columns[5]])
```

```
print(df)
```

	Age	Blood Pressure (mmHg)	Cholesterol (mg/dL)	diabetes_Yes	\
0	0.557564	1.124185	0.889863	0.0	
1	-0.310040	-1.332938	0.679581	1.0	
2	-1.061964	-1.584950	1.660897	1.0	
3	1.367328	-1.238433	1.076780	0.0	
4	1.483009	0.021630	1.684262	1.0	
...	...	...	...	...	
997	0.210522	-1.175430	-1.166228	NaN	
998	1.367328	-0.702906	-0.675570	NaN	
999	0.037002	0.305144	-0.628841	NaN	
1002	0.731085	-0.954919	1.450615	NaN	
1003	0.037002	-1.742458	1.216968	NaN	

  

	smoking status_Former	smoking status_Never	Chest Pain_Atypical	Angina	\
0	0	1		0.0	
2			0.0		
3			1.0		
4			0.0		
...			...		
997			NaN		
998			NaN		
999			NaN		
1002			NaN		
1003			NaN		

  

	Treatment_Lifestyle Changes	Treatment_Medication
0	1.0	0.0
1	0.0	0.0
2	0.0	0.0
3	0.0	0.0
4	0.0	1.0
...	...	...
997	NaN	NaN
998	NaN	NaN
999	NaN	NaN
1002	NaN	NaN
1003	NaN	NaN

```
[1002 rows x 12 columns]
```

Out[26]: StandardScaler()

In a Jupyter environment, please rerun this cell to show the HTML representation or trust the notebook.  
On GitHub, the HTML representation is unable to render, please try loading this page with nbviewer.org.

```
In [27]: df['Age'] = std_scale.fit_transform(df[['Age']])
df['Blood Pressure (mmHg)'] = std_scale.fit_transform(df[['Blood Pressure (mmHg)']])
df['Cholesterol (mg/dL)'] = std_scale.fit_transform(df[['Cholesterol (mg/dL)']])
```

In [28]: df.head()

Out[28]:

	Age	Blood Pressure (mmHg)	Cholesterol (mg/dL)	Has Diabetes	Smoking Status	Chest Pain Type	Treatment
0	0.557564	1.124185	0.889863	No	Never	Typical Angina	Lifestyle Changes
1	-0.310040	-1.332938	0.679581	Yes	Never	Atypical Angina	Angioplasty
2	-1.061964	-1.584950	1.660897	Yes	Current	Typical Angina	Angioplasty
3	1.367328	-1.238433	1.076780	No	Never	Atypical Angina	Coronary Artery Bypass Graft (CABG)
4	1.483009	0.021630	1.684262	Yes	Current	Non-anginal Pain	Medication

```
In [29]: dummies=pd.get_dummies(df[["Has Diabetes", "Smoking Status","Chest Pain Type","Treatment"]], columns=["Has Diabetes", "Smoking St
dummies.head(10)
#hot Label
```

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	diabetes_Yes	smoking status_Former	smoking status_Never	Pain_Atypical Angina	Chest Pain_Non- anginal Pain	Chest Pain_Typical Angina	Treatment_Coronary Artery Bypass Graft (CABG)	Treatment_Lifestyle Changes	Treatment_
0	0	0	1	0	0	1	0	1	
1	1	0	1	1	0	0	0	0	
2	1	0	0	0	0	1	0	0	
3	0	0	1	1	0	0	1	0	
4	1	0	0	0	1	0	0	0	

```
columns=["Has Diabetes", "Smoking Status", "Chest Pain Type", "Treatment"]
```