

```

import pandas as pd

import numpy as np

import matplotlib.pyplot as plt

import tensorflow

from tensorflow.keras.models import Sequential

from tensorflow.keras.layers import Layer, Dense, Dropout

data=pd.read_csv("drug200.csv")

data.head()

```

	Age	Sex	BP	Cholesterol	Na_to_K	Drug
0	23	F	HIGH	HIGH	25.355	DrugY
1	47	M	LOW	HIGH	13.093	drugC
2	47	M	LOW	HIGH	10.114	drugC
3	28	F	NORMAL	HIGH	7.798	drugX
4	61	F	LOW	HIGH	18.043	DrugY

```

data.shape

(200, 6)

```

```

data.isnull().sum()

Age          0
Sex          0
BP           0
Cholesterol  0
Na_to_K      0
Drug         0
dtype: int64

```

Double-click (or enter) to edit

1. List item
2. List item

```


#splitting the data values as x and y
x = data.iloc[:,0:-1]
y = data.iloc[:, -1]

```

```

x

```



	Age	Sex	BP	Cholesterol	Na_to_K
0	23	F	HIGH	HIGH	25.355
1	47	M	LOW	HIGH	13.093
2	47	M	LOW	HIGH	10.114
3	28	F	NORMAL	HIGH	7.798
4	61	F	LOW	HIGH	18.043
...
195	56	F	LOW	HIGH	11.567
196	16	M	LOW	HIGH	12.006
197	52	M	NORMAL	HIGH	9.894
198	23	M	NORMAL	NORMAL	14.020

```
x.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 200 entries, 0 to 199
Data columns (total 5 columns):
#   Column      Non-Null Count  Dtype
---  -
0   Age          200 non-null    int64
1   Sex          200 non-null    object
2   BP           200 non-null    object
3   Cholesterol  200 non-null    object
4   Na_to_K      200 non-null    float64
dtypes: float64(1), int64(1), object(3)
memory usage: 7.9+ KB
```

```
y
```

```
0      DrugY
1      drugC
2      drugC
3      drugX
4      DrugY
...
195     drugC
196     drugC
197     drugX
198     drugX
199     drugX
Name: Drug, Length: 200, dtype: object
```

```
#splitting the data values as x and y
x = data.iloc[:,0:-1]
y = data.iloc[:, -1]
```

```
x
```

	Age	Sex	BP	Cholesterol	Na_to_K
0	23	F	HIGH	HIGH	25.355
1	47	M	LOW	HIGH	13.093
2	47	M	LOW	HIGH	10.114
3	28	F	NORMAL	HIGH	7.798
4	61	F	LOW	HIGH	18.043
...

x.info

<bound	method	DataFrame.info	of	Age	Sex	BP	Cholesterol	Na_to_K
0	23	F	HIGH	HIGH	25.355			
1	47	M	LOW	HIGH	13.093			
2	47	M	LOW	HIGH	10.114			
3	28	F	NORMAL	HIGH	7.798			
4	61	F	LOW	HIGH	18.043			
..			
195	56	F	LOW	HIGH	11.567			
196	16	M	LOW	HIGH	12.006			
197	52	M	NORMAL	HIGH	9.894			
198	23	M	NORMAL	NORMAL	14.020			
199	40	F	LOW	NORMAL	11.349			

[200 rows x 5 columns]>

x

	Age	Sex	BP	Cholesterol	Na_to_K
0	23	F	HIGH	HIGH	25.355
1	47	M	LOW	HIGH	13.093
2	47	M	LOW	HIGH	10.114
3	28	F	NORMAL	HIGH	7.798
4	61	F	LOW	HIGH	18.043
...
195	56	F	LOW	HIGH	11.567
196	16	M	LOW	HIGH	12.006
197	52	M	NORMAL	HIGH	9.894
198	23	M	NORMAL	NORMAL	14.020
199	40	F	LOW	NORMAL	11.349

200 rows x 5 columns

x.replace(np.nan, '0', inplace=True)

x

	Age	Sex	BP	Cholesterol	Na_to_K	
0	23	F	HIGH	HIGH	25.355	
1	47	M	LOW	HIGH	13.093	
2	47	M	LOW	HIGH	10.114	
3	28	F	NORMAL	HIGH	7.798	
4	61	F	LOW	HIGH	18.043	
...	
195	56	F	LOW	HIGH	11.567	
196	46	M	LOW	HIGH	13.093	

y

```
0      DrugY
1      drugC
2      drugC
3      drugX
4      DrugY
...
195    drugC
196    drugC
197    drugX
198    drugX
199    drugX
Name: Drug, Length: 200, dtype: object
```