```
from google.colab import files
upload=files.upload()
```

```
Choose Files forestfires.csv
```

- **forestfires.csv**(text/csv) - 46843 bytes, last modified: 2/28/2023 - 100% done

```
Saving forestfires.csv to forestfires.csv
```

```
import pandas as pd
import numpy as np
```

```
df=pd.read_csv("forestfires.csv")
df.head()
```

	month	day	FFMC	DMC	DC	ISI	temp	RH	wind	rain	...	monthfeb	monthjan
0	mar	fri	86.2	26.2	94.3	5.1	8.2	51	6.7	0.0	...	0	0
1	oct	tue	90.6	35.4	669.1	6.7	18.0	33	0.9	0.0	...	0	0
2	oct	sat	90.6	43.7	686.9	6.7	14.6	33	1.3	0.0	...	0	0
3	mar	fri	91.7	33.3	77.5	9.0	8.3	97	4.0	0.2	...	0	0
4	mar	sun	89.3	51.3	102.2	9.6	11.4	99	1.8	0.0	...	0	0

5 rows × 31 columns

```
df.isnull().sum()
df.dtypes
df.shape
```

```
(517, 31)
```

```
df1=df.drop(df.columns[[0,1,30]],axis=1)
df1.head()
df1.dtypes
```

```
FFMC        float64
DMC         float64
DC          float64
ISI         float64
temp        float64
RH            int64
wind        float64
rain        float64
area        float64
dayfri        int64
daymon        int64
daysat        int64
daysun        int64
daythu        int64
daytue        int64
daywed        int64
monthapr      int64
monthaug      int64
monthdec      int64
monthfeb      int64
monthjan      int64
monthjul      int64
monthjun      int64
monthmar      int64
monthmay      int64
monthnov      int64
monthoct      int64
monthsep      int64
dtype: object
```

```
df1.corr()
```

	temp	RH	wind	rain	area	dayfri	...	monthdec	monthfeb
.431532	-0.300995	-0.028485	0.056702	0.040122	0.019306	...	-0.137044	-0.281535
.469594	0.073795	-0.105342	0.074790	0.072994	-0.012010	...	-0.176301	-0.317899
.496208	-0.039192	-0.203466	0.035861	0.049383	-0.004220	...	-0.105642	-0.399277
.394287	-0.132517	0.106826	0.067668	0.008258	0.046695	...	-0.162322	-0.249777
.000000	-0.527390	-0.227116	0.069491	0.097844	-0.071949	...	-0.329648	-0.320015
.527390	1.000000	0.069410	0.099751	-0.075519	0.064506	...	-0.047714	0.140430
.227116	0.069410	1.000000	0.061119	0.012317	0.118090	...	0.269702	-0.029431
.069491	0.099751	0.061119	1.000000	-0.007366	-0.004261	...	-0.009752	-0.014698
.097844	-0.075519	0.012317	-0.007366	1.000000	-0.052911	...	0.001010	-0.020732
.071949	0.064506	0.118090	-0.004261	-0.052911	1.000000	...	-0.019140	0.046323
.136529	0.009376	-0.063881	-0.029945	-0.021206	-0.181293	...	0.114519	0.003933
.034899	-0.023869	-0.063799	-0.032271	0.087868	-0.195372	...	-0.058625	0.020406
.014403	0.136220	0.027981	-0.017872	-0.020463	-0.210462	...	-0.024966	0.008416
.051432	-0.123061	-0.062553	-0.026798	0.020121	-0.162237	...	-0.002838	-0.042278
.035630	-0.014211	0.053396	0.139311	-0.001333	-0.166728	...	-0.005125	-0.014491
.090580	-0.087508	-0.019965	-0.020744	-0.011452	-0.151487	...	0.002899	-0.035713
.157051	0.021235	0.048266	-0.009752	-0.008280	-0.019140	...	-0.017717	-0.026701
.351404	0.054761	0.028577	0.093101	-0.004187	-0.100837	...	-0.098941	-0.149116
.329648	-0.047714	0.269702	-0.009752	0.001010	-0.019140	...	1.000000	-0.026701
.320015	0.140430	-0.029431	-0.014698	-0.020732	0.046323	...	-0.026701	1.000000
.146520	0.170923	-0.070245	-0.004566	-0.012589	-0.027643	...	-0.008295	-0.012501
.142588	0.013185	-0.040645	-0.013390	0.006149	-0.048969	...	-0.034190	-0.051528
.051015	0.009382	0.012124	-0.013510	-0.020314	0.006000	...	-0.024543	-0.036989
.341797	-0.089836	0.181433	-0.020744	-0.045596	0.036205	...	-0.045456	-0.068508
.045540	0.086822	0.015054	-0.004566	0.006264	0.056423	...	-0.008295	-0.012501
.053798	-0.035885	0.011864	-0.003225	-0.008893	-0.019527	...	-0.005860	-0.008831
.053513	-0.072334	-0.053850	-0.012665	-0.016878	-0.045585	...	-0.023008	-0.034676
.088006	-0.062596	-0.181476	-0.051733	0.056573	0.107671	...	-0.093982	-0.141642

```
df2=df[["size_category"]]


df3=pd.concat([df1,df2],axis=1)
df3.head()
df3.shape
df3.dtypes
```

```
FFMC             float64
DMC              float64
DC               float64
ISI              float64
temp             float64
RH                 int64
wind             float64
rain             float64
area             float64
dayfri             int64
daymon             int64
daysat             int64
daysun             int64
daythu             int64
daytue             int64
daywed             int64
monthapr           int64
monthaug           int64
monthdec           int64
monthfeb           int64
monthjan           int64
```

```
monthjul           int64
monthjun           int64
monthmar           int64
monthmay           int64
monthnov           int64
monthoct           int64
monthsep           int64
size_category     object
dtype: object
```

```
x=df.iloc[:,0:28]
y=df["size_category"]
```

```
from sklearn.preprocessing import MinMaxScaler
MM=MinMaxScaler()
for i in range(0,28):
  X.iloc[:,0:28]=MM.fit_transform(x.iloc[:,0:28])
```

```
---------------------------------------------------------------------------
ValueError                                Traceback (most recent call last)
<ipython-input-20-05828c975498> in <module>
      2 MM=MinMaxScaler()
      3 for i in range(0,28):
----> 4   X.iloc[:,0:28]=MM.fit_transform(x.iloc[:,0:28])

 7 frames 
/usr/local/lib/python3.8/dist-packages/pandas/core/generic.py in __array__(self, dtype)
   1991
   1992     def __array__(self, dtype: NpDtype | None = None) -> np.ndarray:
-> 1993         return np.asarray(self._values, dtype=dtype)
   1994
   1995     def __array_wrap__(

ValueError: could not convert string to float: 'mar'
```

SEARCH STACK OVERFLOW

```
df["monthmar"].value_counts()
```

```
0    463
1     54
Name: monthmar, dtype: int64
```