

```
In [2]: #importing libraries
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
```

```
In [3]: #loading Data
data1 = pd.read_csv("train.csv")
```

```
In [4]: data1.head()
```

```
Out[4]: PassengerId  Survived  Pclass          Name     Sex   Age  SibSp  Parch  Ticket  Fare Cabin Embarked
 0            1       0    3  Braund, Mr. Owen Harris   male  22.0      1     0    A/5 21171  7.2500   NaN      S
 1            2       1    1  Cumings, Mrs. John Bradley (Florence Briggs Th... female  38.0      1     0    PC 17599  71.2833  C85      C
 2            3       1    3  Heikkinen, Miss. Laina  female  26.0      0     0  STON/O2. 3101282  7.9250   NaN      S
 3            4       1    1  Futrelle, Mrs. Jacques Heath (Lily May Peel) female  35.0      1     0   113803  53.1000  C123      S
 4            5       0    3  Allen, Mr. William Henry   male  35.0      0     0   373450  8.0500   NaN      S
```

```
In [5]: data1.tail()
```

```
Out[5]: PassengerId  Survived  Pclass          Name     Sex   Age  SibSp  Parch  Ticket  Fare Cabin Embarked
886         887       0    2  Montvila, Rev. Juozas   male  27.0      0     0   211536  13.00   NaN      S
887         888       1    1  Graham, Miss. Margaret Edith female  19.0      0     0   112053  30.00  B42      S
888         889       0    3  Johnston, Miss. Catherine Helen "Carrie" female   NaN      1     2  W.C. 6607  23.45   NaN      S
889         890       1    1  Behr, Mr. Karl Howell   male  26.0      0     0   111369  30.00  C148      C
890         891       0    3  Dooley, Mr. Patrick   male  32.0      0     0   370376  7.75   NaN      Q
```

```
In [6]: data1.shape
```

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Out[6]: (891, 12)
```

```
In [7]: data1.isnull()
```

```
Out[7]: PassengerId  Survived  Pclass  Name   Sex   Age  SibSp  Parch  Ticket  Fare Cabin Embarked
 0        False  False  False  False  False  False  False  False  False  True  False
 1        False  False
 2        False  True  False
 3        False  False
 4        False  True  False
 ...
 886      False  True  False
 887      False  False
 888      False  False  False  False  False  True  False  False  False  False  False  True  False
 889      False  False
 890      False  True  False
```

891 rows × 12 columns

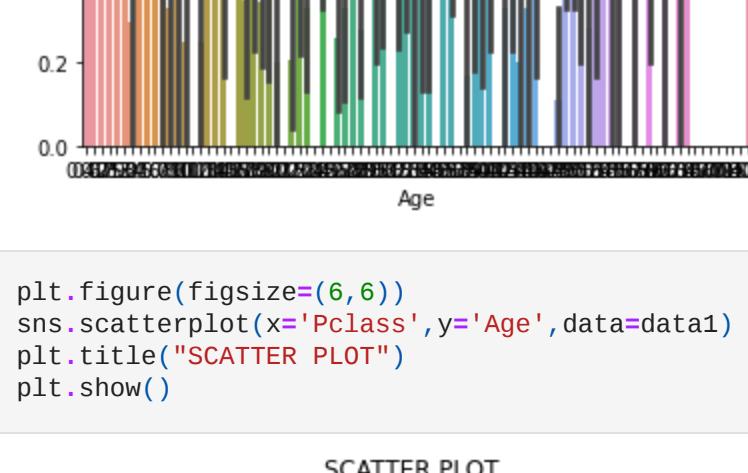
```
In [8]: data1.isnull().sum()
```

```
Out[8]: PassengerId      0
Survived        0
Pclass         0
Name          0
Sex           0
Age         177
SibSp         0
Parch         0
Ticket        0
Fare          0
Cabin       687
Embarked      2
dtype: int64
```

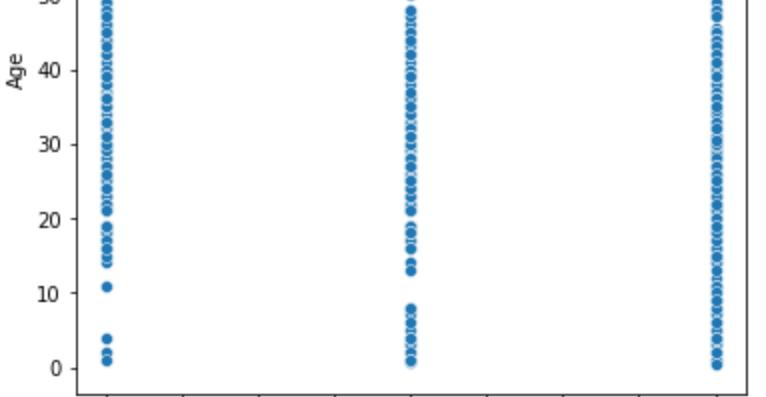
```
In [15]: sns.heatmap(data1.isnull())
plt.title("HEAT MAP")
plt.show()
```



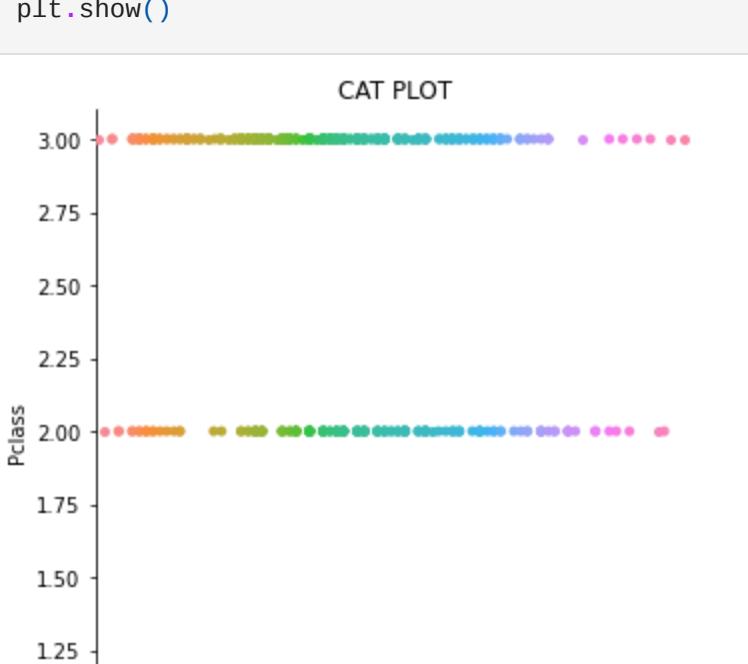
```
In [16]: sns.lineplot(data=data1,x="Age",y="Survived")
plt.title("LINE PLOT")
plt.show()
```



```
In [18]: sns.barplot(data=data1,x="Age",y="Survived")
plt.title("BAR PLOT")
plt.show()
```



```
In [19]: plt.figure(figsize=(6,6))
sns.scatterplot(x='Pclass',y='Age',data=data1)
plt.title("SCATTER PLOT")
plt.show()
```



```
In [27]: sns.catplot(data=data1,x="Age",y="Pclass")
plt.title("CAT PLOT")
plt.show()
```

