```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
import plotly.express as px
from wordcloud import WordCloud, STOPWORDS, ImageColorGenerator
from sklearn.model_selection import train_test_split
from sklearn.linear_model import PassiveAggressiveRegressor
```

```
from google.colab import files
```

```
uploaded= files.upload()
```

Browse... house.xlsx

house.xlsx(application/vnd.openxmlformats-officedocument.spreadsheetml.sheet) - 13376 bytes, last modified: n/a - 100% done

```
df1=pd.read_excel("house (2).xlsx")
```

```
paru=df1
```

```
paru.head()
```

	Area	Price	Bedroom	address
0	2.0	12	1	NaN
1	3.0	15	2	#,Name,Type 1,Type 2,HP,Attack,Defense,Sp. Atk...
2	5.5	20	3	1,Bulbasaur,Grass,Poison,45,49,49,65,65,45,1,F...
3	7.0	25	4	2,Ivysaur,Grass,Poison,60,62,63,80,80,60,1,FALSE
4	11.5	40	5	3,Venusaur,Grass,Poison,80,82,83,100,100,80,1

```
paru.describe()
```

	Area	Price	Bedroom
count	17.000000	17.000000	17.000000
mean	23.941176	121.294118	8.588235
std	16.333327	98.737509	5.136375
min	2.000000	12.000000	1.000000

✓ 0s completed at 1:59 PM

50%	22.000000	95.000000	8.000000
75%	38.000000	200.000000	12.000000

```
paru.isnull().sum()
```

```
Area       0
Price      0
Bedroom    0
address    1
dtype: int64
```

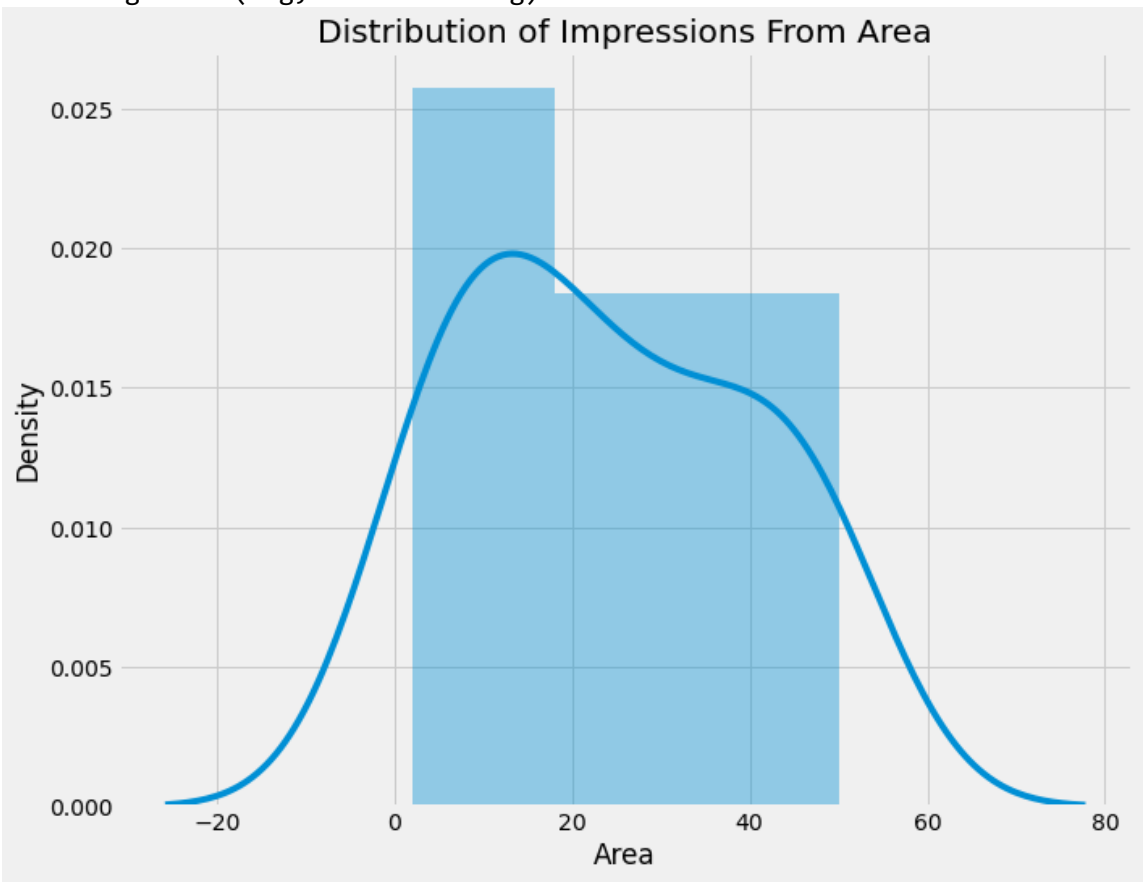
```
paru.dropna()
```

	Area	Price	Bedroom	address
1	3.0	15	2	#,Name,Type 1,Type 2,HP,Attack,Defense,Sp. Atk...
2	5.5	20	3	1,Bulbasaur,Grass,Poison,45,49,49,65,65,45,1,F...
3	7.0	25	4	2,Ivysaur,Grass,Poison,60,62,63,80,80,60,1,FALSE
4	11.5	40	5	3,Venusaur,Grass,Poison,80,82,83,100,100,80,1,...
5	13.0	45	5	3,VenusaurMega Venusaur,Grass,Poison,80,100,12...
6	15.0	55	6	4,Charmander,Fire,,39,52,43,60,50,65,1,FALSE
7	18.0	75	7	5,Charmeleon,Fire,,58,64,58,80,65,80,1,FALSE
8	22.0	95	8	6,Charizard,Fire,Flying,78,84,78,109,85,100,1,...
9	25.0	120	9	6,CharizardMega Charizard X,Fire,Dragon,78,130...
10	30.0	140	10	6,CharizardMega Charizard Y,Fire,Flying,78,104...
11	32.0	160	11	7,Squirtle,Water,,44,48,65,50,64,43,1,FALSE
12	38.0	200	12	8,Wartortle,Water,,59,63,80,65,80,58,1,FALSE
13	42.0	230	14	9,Blastoise,Water,,79,83,100,85,105,78,1,FALSE
14	45.0	250	15	wefdgerg

```
paru.drop_duplicates(inplace = True)
```

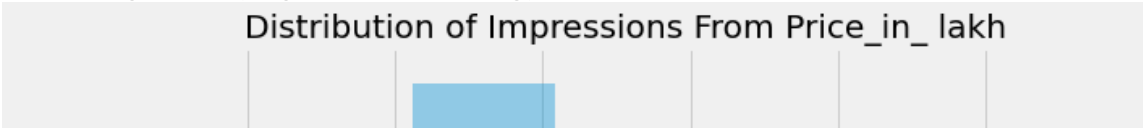
```
plt.figure(figsize=(10, 8))
plt.style.use('fivethirtyeight')
plt.title("Distribution of Impressions From Area")
sns.distplot(paru['Area'])
plt.show()
```

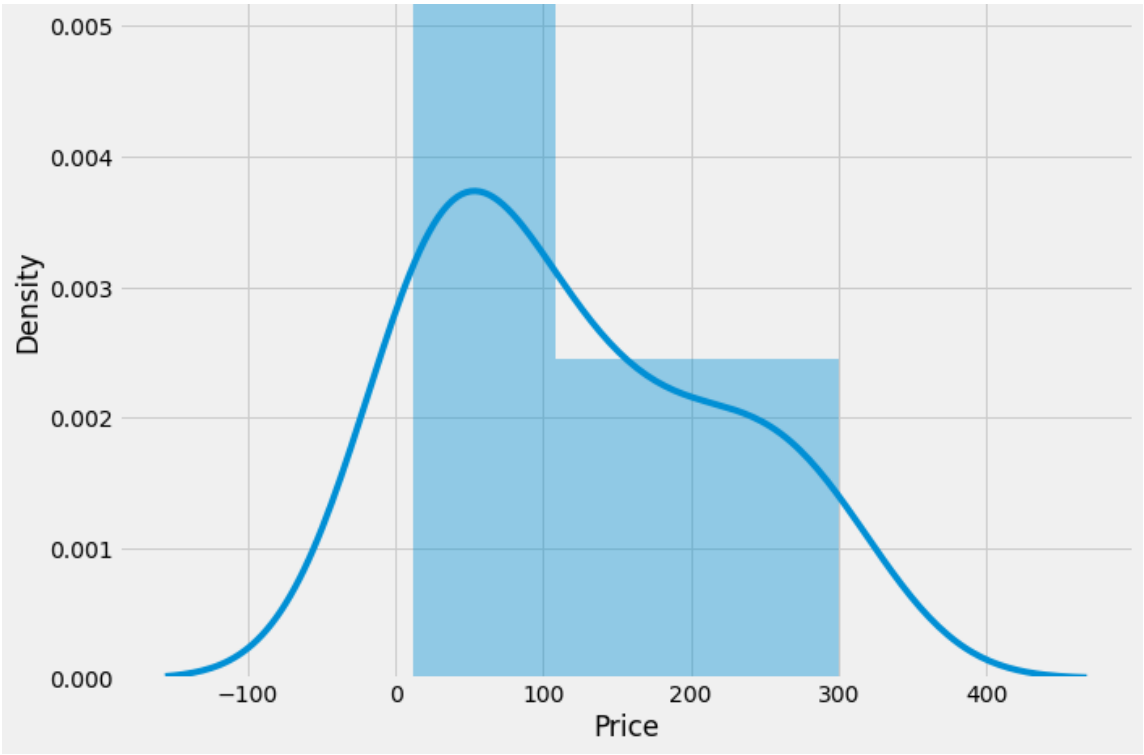
```
/usr/local/lib/python3.7/dist-packages/seaborn/distributions.py:2619: Futu
  warnings.warn(msg, FutureWarning)
```




```
plt.figure(figsize=(10, 8))
plt.style.use('fivethirtyeight')
plt.title("Distribution of Impressions From Price_in_ lakh")
sns.distplot(paru['Price'])
plt.show()
```

```
/usr/local/lib/python3.7/dist-packages/seaborn/distributions.py:2619: Futu
  warnings.warn(msg, FutureWarning)
```






```
correlation = paru.corr()
print(correlation["Area"].sort_values(ascending=False))
```

```
Area       1.000000
Bedroom    0.994996
Price      0.990850
Name: Area, dtype: float64
```

```
predict = "Price"
data = paru[[ "Price","Area","Bedroom"]]
x = np.array(data.drop([predict], 1))
y = np.array(data[predict])

from sklearn.model_selection import train_test_split
xtrain, xtest, ytrain, ytest = train_test_split(x, y, test_size=0.2)

from sklearn.tree import DecisionTreeRegressor
model = DecisionTreeRegressor()
model.fit(xtrain, ytrain)
predictions = model.predict(xtest)

from sklearn.metrics import mean_absolute_error
```

```
model.score(xtest, predictions)
```

```
/usr/local/lib/python3.7/dist-packages/ipykernel_launcher.py:3: FutureWarning: In a f
  This is separate from the ipykernel package so we can avoid doing imports until
1.0
```

```
X = paru[["Area","Bedroom"]]
```

```
y = paru['Price']
```

```
from sklearn.model_selection import train_test_split
```

```
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, random_state=None)
```

```
from sklearn.linear_model import LinearRegression
```

```
linreg = LinearRegression()
linreg.fit(X_train, y_train)
```

```
LinearRegression()
```

```
print (linreg.intercept_)
print (linreg.coef_)
```

```
-26.004535552081975
[4.28493975 5.34103721]
```

```
Price = linreg.intercept_+4.28493975*55+5.34103721*20
```

```
print("the Price is ",Price, "lakh for a area of 55 sqr mtr and 20 Bedrooms")
```

```
the Price is  316.487894897918 lakh for a area of 55 sqr mtr and 20 Bedrooms
```

The model pridict that for a Area = 55 sqr mtr and number of bedroom =20 the price will be of 328.97 lakh

```
Price = linreg.intercept_+4.28493975*50+5.34103721*18
```

```
print("the Price is ",Price1, "lakh for a area of 50 sqr mtr and 18 Bedrooms")
```

```
the Price is  293.0137 lakh for a area of 50 sqr mtr and 18 Bedrooms
```

```
model_efficiency = ((Price1/300)*100)
```

```
print(model_efficiency)
```

```
     97.67123333333333
```

the model pridict that for a area of 50 sqr mtr and 18 Bedrroms the price is293.0137 lakh and as per data the price should be 300 lakh for same parameter so model efficiency is 97.671 %

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