

Importing Libraries

```
In [1]: import pandas as pd
```

Load Dataset

```
In [2]: path = r"https://drive.google.com/uc?export=download&id=1xxDtrZKfuWQf1-6KA9XEd_eatitNPnkB"
df = pd.read_csv(path)
```

```
In [3]: df.head()
```

Out[3]:

	bath	balcony	price	total_sqft_int	bhk	price_per_sqft	area_typeSuper built-up Area	area_typeBuilt up Area
0	3.0	2.0	150.0	1672.0	3	8971.291866	1	0
1	3.0	3.0	149.0	1750.0	3	8514.285714	0	1
2	3.0	2.0	150.0	1750.0	3	8571.428571	1	0
3	2.0	2.0	40.0	1250.0	2	3200.000000	1	0
4	2.0	2.0	83.0	1200.0	2	6916.666667	0	0

5 rows × 108 columns

Split Data

```
In [4]: x = df.drop("price",axis=1)
y = df['price']

print("Shape of x : ",x.shape)
print("Shape of y : ",y.shape)
```

Shape of x : (7120, 107)
Shape of y : (7120,)

```
In [5]: 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=51)

print("Shape of x_train :", x_train.shape)
print("Shape of y_train :", y_train.shape)
print("Shape of x_test :", x_test.shape)
print("Shape of y_test :",y_test.shape)
```

Shape of x_train : (5696, 107)
Shape of y_train : (5696,)
Shape of x_test : (1424, 107)
Shape of y_test : (1424,)

K Nearest Neighbor Regression - ML Model Training

```
In [6]: from sklearn.neighbors import KNeighborsRegressor

regressor = KNeighborsRegressor(n_neighbors=5)
regressor.fit(x_train, y_train)
```

Out[6]: KNeighborsRegressor(algorithm='auto', leaf_size=30, metric='minkowski', metric_params=None, n_jobs=1, n_neighbors=5, p=2, weights='uniform')

```
In [7]: regressor.score(x_test,y_test)
```

Out[7]: 0.8858213777326956

Predict the value of Home

```
In [8]: data = x_test.iloc[-1,:]
```

```
In [9]: regressor.predict([data])
```

Out[9]: array([184.4])

```
In [10]: y_test.iloc[-1]
```

Out[10]: 180.0

Predict the value of multiple houses

```
In [11]: y_pred = regressor.predict(x_test)
y_pred
```

Out[11]: array([77.378, 39.808, 120.2 , ..., 33.405, 63. , 184.4])