

```
from sklearn.linear_model import LinearRegression
regressor=LinearRegression()
regressor.fit(X_train , y_train)

LinearRegression()
```

```
print('Training data accuracy score :',regressor.score(X_train ,
y_train) )
```

```
print('Testing data accuracy
score :',regressor.score(X_test,y_test) )
```

Training data accuracy score : 0.9192986579075526

Testing data accuracy score : 0.9146818498754016

```
coef=pd.DataFrame(data=regressor.coef_, index=df.iloc[:,:-
2].columns,columns=['Coefficients'])
```

```
print('The Coefficient of each column :')
coef
```

The Coefficient of each column :

Coefficients

Avg. Area Income 232679.724643

Avg. Area House Age 163841.046593

Avg. Area Number of Rooms 121110.555478

Avg. Area Number of Bedrooms 2892.815119

Area Population 151252.342377

```
print('The Intercept with y-axis :',regressor.intercept_)
```

The Intercept with y-axis : 1228219.1492415695

```
y_pred =regressor.predict(X_test)
```

```
real_data=pd.DataFrame(y_test , columns=['Y_real'])
```

```
data_fin =real_data.assign(Y_predicted =y_pred)
```

```
data_fin
```

Y_real Y_predicted

0 1.339096e+06 1.308536e+06

```

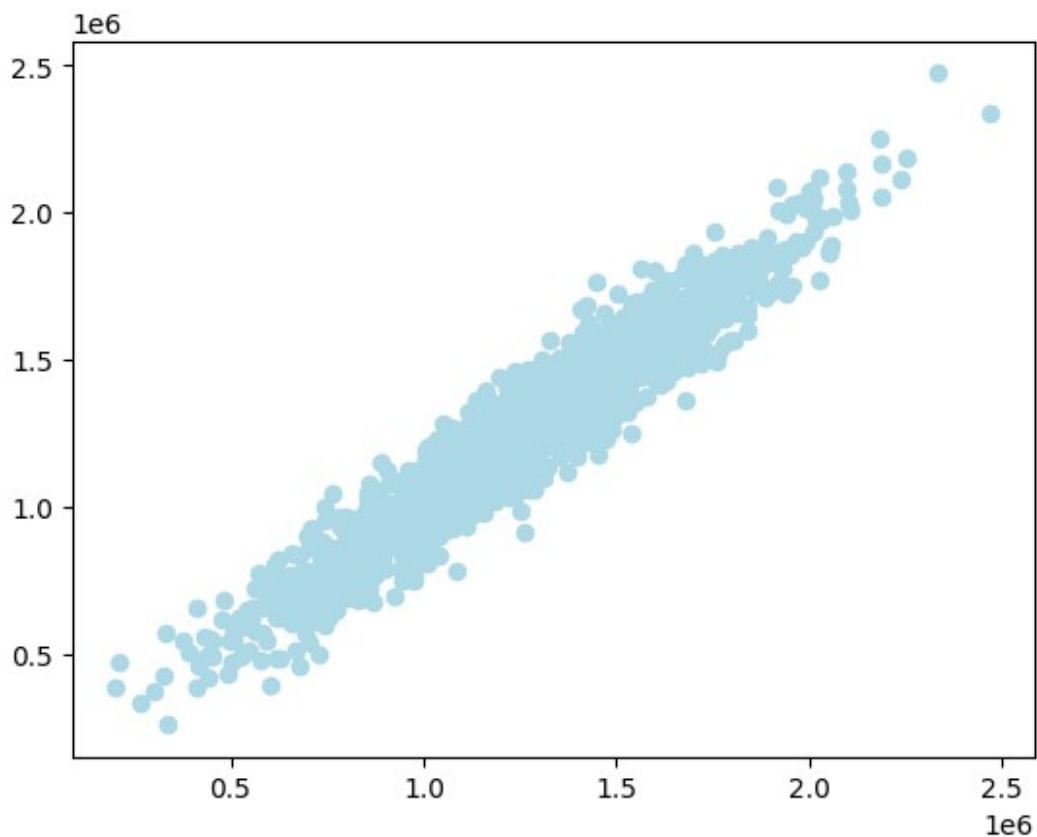
1 1.251794e+06 1.237123e+06
2 1.340095e+06 1.243836e+06
3 1.431508e+06 1.229242e+06
4 1.042374e+06 1.059353e+06
... ..
1495 1.348222e+06 1.437325e+06
1496 1.309937e+06 1.094962e+06
1497 1.472887e+06 1.457120e+06
1498 1.409762e+06 1.483429e+06
1499 1.009606e+06 1.047511e+06

```

```
[1500 rows x 2 columns]
```

```
plt.scatter(y_test,y_pred , color='lightblue' )
```

```
<matplotlib.collections.PathCollection at 0x7f21481702b0>
```



```

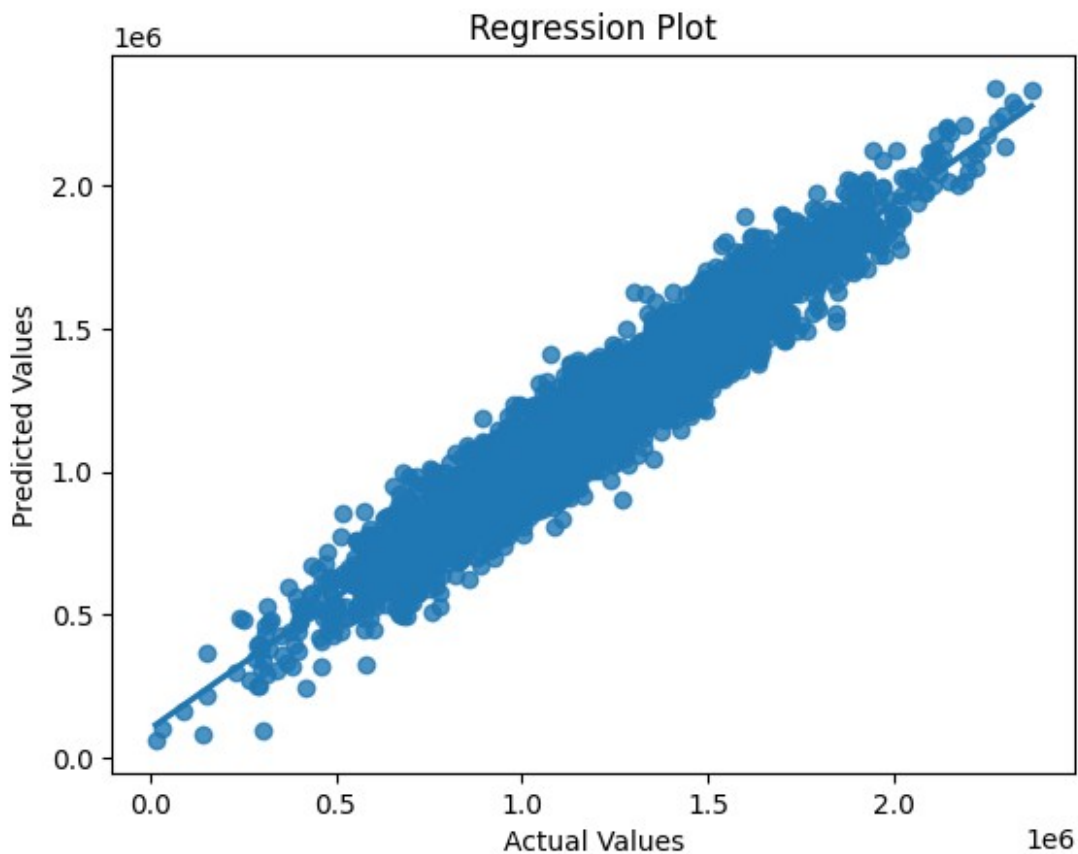
import seaborn as sns
import matplotlib.pyplot as plt

```

```
regressor.fit(X_train, y_train)
```

```
y_pred = regressor.predict(X_train)
```

```
sns.regplot(x=y_train, y=y_pred)  
plt.xlabel("Actual Values")  
plt.ylabel("Predicted Values")  
plt.title("Regression Plot")  
plt.show()
```



```
print('Mean Absolute Error :',mean_absolute_error(y_test,y_pred))  
print('Median Absolute Error :',median_absolute_error(y_test,y_pred))  
print('Mean Squared Error :',mean_squared_error(y_test,y_pred))
```

Mean Absolute Error : 81135.5660933688

Median Absolute Error : 70547.8609665166

Mean Squared Error : 10068422551.401031