

Skills Network Labs

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### Question 7

Fit a linear regression model to predict the 'price' using the list of features:

Then calculate the  $R^2$ . Take a screenshot of your code.

```
[27]: features = df[['floors', 'waterfront','lat', 'bedrooms', 'sqft_basement', 'view', 'bathrooms', 'sqft_living15', 'sqft_above', 'grade', 'sqft_living']]

[30]: features = df[['floors', 'waterfront','lat', 'bedrooms', 'sqft_basement', 'view', 'bathrooms', 'sqft_living15', 'sqft_above', 'grade', 'sqft_living']]
y = df['price']
lm.fit(df[['floors']],y)
y_hat = lm.predict(df[['floors']])
lm.score(df[['floors']],y)

[30]: 0.06594310068341092

[31]: lm.fit(df[['waterfront']],y)
y_hat = lm.predict(df[['waterfront']])
lm.score(df[['waterfront']],y)

[31]: 0.87095267538578331

[32]: lm.fit(df[['lat']],y)
y_hat = lm.predict(df[['lat']])
lm.score(df[['lat']],y)

[32]: 0.0942511367291744

[33]: lm.fit(df[['bedrooms']],y)
y_hat = lm.predict(df[['bedrooms']])
lm.score(df[['bedrooms']],y)

[33]: 0.09535546506131365

[34]: lm.fit(df[['sqft_basement']],y)
y_hat = lm.predict(df[['sqft_basement']])
```

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```
[34]: lm.score(df[['sqft_basement']],y)

[34]: 0.104856815269744

[35]: lm.fit(df[['view']],y)
y_hat = lm.predict(df[['view']])
lm.score(df[['view']],y)

[35]: 0.15784211984121932

[36]: lm.fit(df[['bathrooms']],y)
y_hat = lm.predict(df[['bathrooms']])
lm.score(df[['bathrooms']],y)

[36]: 0.27639993060314383

[37]: lm.fit(df[['sqft_living15']],y)
y_hat = lm.predict(df[['sqft_living15']])
lm.score(df[['sqft_living15']],y)

[37]: 0.3426684607560172

[38]: lm.fit(df[['sqft_above']],y)
y_hat = lm.predict(df[['sqft_above']])
lm.score(df[['sqft_above']],y)

[38]: 0.3667117528382793

[39]: lm.fit(df[['grade']],y)
y_hat = lm.predict(df[['grade']])
lm.score(df[['grade']],y)

[39]: 0.44546848618928724
```

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```
[60]: lm.fit(df[['sqft_living']],y)
y_hat = lm.predict(df[['sqft_living']])
lm.score(df[['sqft_living']],y)

[60]: 0.4928532179037931

[62]: features = df[['floors', 'waterfront','lat', 'bedrooms', 'sqft_basement', 'view', 'bathrooms', 'sqft_living15', 'sqft_above', 'grade', 'sqft_living']]
y = df['price']
lm.fit(features,y)
y_hat = lm.predict(features)
lm.score(features,y)

[62]: 0.6576890354915759
```

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