

Spyder (Python 3.10)

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C:\Users\yogay\OneDrive\Desktop\Yogita_Yadav\github_projects\untitled0.py

mlr model rfe with constat- 42467.py X untitled0.py X

```
20
21 #Splitting Datasets into Training & Testing
22 from sklearn.model_selection import train_test_split
23 X_train, X_test, y_train, y_test = train_test_split(X, y, tes
24
25 from sklearn.linear_model import LinearRegression
26 regressor = LinearRegression()
27 regressor.fit(X_train, y_train)
28
29 y_pred = regressor.predict(X_test)
30
31 constant = regressor.intercept_
32 constant
33
34 slope = regressor.coef_
35 slope
36
37 import statsmodels.formula.api as sm
38
39 X = np.append(arr = np.ones((21613,1)).astype(int), values =
40
41 import statsmodels.api as sm
42 X_opt = X[:,[0,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,]
43 regressor_OLS = sm.OLS(endog=y, exog=X_opt).fit()
44 regressor_OLS.summary()
45
46 import statsmodels.api as sm
47 X_opt = X[:,[0,1,2,3,4]]
48 regressor_OLS = sm.OLS(endog=y, exog=X_opt).fit()
49 regressor_OLS.summary()
50
51
52
```

Variable Explorer

Name	Type	Size	Value
constant	float64	1	4166134.7323275423

Console 1/A X

Covariance Type: nonrobust

	coef	std err	t	P> t	[0.025	0.975]
const	6.69e+06	2.93e+06	2.282	0.022	9.44e+05	1.24e+07
x1	-3.577e+04	1891.843	-18.906	0.000	-3.95e+04	-3.21e+04
x2	4.114e+04	3253.678	12.645	0.000	3.48e+04	4.75e+04
x3	110.4397	2.270	48.661	0.000	105.991	114.888
x4	0.1286	0.048	2.683	0.007	0.035	0.223
x5	6689.5501	3595.859	1.860	0.063	-358.599	1.37e+04
x6	5.83e+05	1.74e+04	33.580	0.000	5.49e+05	6.17e+05
x7	5.287e+04	2140.055	24.705	0.000	4.87e+04	5.71e+04
x8	2.639e+04	2351.461	11.221	0.000	2.18e+04	3.1e+04
x9	9.589e+04	2152.789	44.542	0.000	9.17e+04	1e+05
x10	70.7884	2.253	31.416	0.000	66.372	75.205
x11	39.6608	2.647	14.985	0.000	34.473	44.848
x12	-2620.2232	72.659	-36.062	0.000	-2762.640	-2477.806
x13	19.8126	3.656	5.420	0.000	12.647	26.978
x14	-582.4199	32.986	-17.657	0.000	-647.074	-517.765
x15	6.027e+05	1.07e+04	56.149	0.000	5.82e+05	6.24e+05
x16	-2.147e+05	1.31e+04	-16.349	0.000	-2.4e+05	-1.89e+05
x17	21.6814	3.448	6.289	0.000	14.924	28.439
x18	-0.3826	0.073	-5.222	0.000	-0.526	-0.239

Omnibus: 18384.201 Durbin-Watson: 1.990
Prob(Omnibus): 0.000 Jarque-Bera (JB): 1868224.491

Python Console History

conda: base (Python 3.10.9) Completions: conda LSP: Python Line 45, Col 1 UTF-8 CRLF RW Mem 70%

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C:\Users\yogay\OneDrive\Desktop\Yogita_Yadav\github_projects\untitled0.py

mlr model rfe with constat- 42467.py X untitled0.py*

```

18 #Create Dummy Dataset
19 X=pd.get_dummies(X)
20
21 #Splitting Datasets into Training & Testing
22 from sklearn.model_selection import train_test_split
23 X_train, X_test, y_train, y_test = train_test_split(X, y, test_size = 0
24
25 from sklearn.linear_model import LinearRegression
26 regressor = LinearRegression()
27 regressor.fit(X_train, y_train)
28
29 y_pred = regressor.predict(X_test)
30
31 constant = regressor.intercept_
32 constant
33
34 slope = regressor.coef_
35 slope
36
37 import statsmodels.formula.api as sm
38
39 X = np.append(arr = np.ones((21613,1)).astype(int), values = X, axis = :
40
41 import statsmodels.api as sm
42 X_opt = X[:,[0,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,]]
43 regressor_OLS = sm.OLS(endog=y, exog=X_opt).fit()
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```

Variable Explorer

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constant	float64	1	4166134.7323275423

Console 1/A X

```

=====
              coef      std err          t      P>|t|      [0.025      0.975]
-----
const      7.035e+06    2.93e+06      2.402      0.016    1.29e+06    1.28e+07
x1         -3.59e+04    1891.451    -18.981     0.000   -3.96e+04   -3.22e+04
x2         4.122e+04    3254.010     12.669     0.000    3.48e+04    4.76e+04
x3          110.7281      2.267      48.833     0.000    106.284    115.172
x4         6477.1943    3595.504      1.801     0.072   -570.260    1.35e+04
x5         5.822e+05    1.74e+04     33.535     0.000    5.48e+05    6.16e+05
x6         5.307e+04    2139.127     24.807     0.000    4.89e+04    5.73e+04
x7         2.627e+04    2351.381     11.171     0.000    2.17e+04    3.09e+04
x8         9.601e+04    2152.664     44.599     0.000    9.18e+04    1e+05
x9          71.1099      2.251     31.597     0.000     66.699     75.521
x10         39.6163      2.647     14.968     0.000     34.428     44.804
x11        -2628.7414     72.600    -36.208     0.000   -2771.043   -2486.440
x12         19.6773      3.656      5.383     0.000     12.512     26.843
x13        -582.2963     32.991    -17.650     0.000   -646.960   -517.632
x14         6.018e+05    1.07e+04     56.083     0.000    5.81e+05    6.23e+05
x15        -2.123e+05    1.31e+04    -16.202     0.000   -2.38e+05   -1.87e+05
x16         21.0754      3.441      6.125     0.000     14.331     27.820
x17         -0.2472      0.053     -4.653     0.000     -0.351     -0.143
=====
Omnibus:            18360.050    Durbin-Watson:           1.990
Prob(Omnibus):        0.000    Jarque-Bera (JB):      1856026.110
Skew:                3.560    Prob(JB):              0.00
Kurtosis:            47.837    Cond. No.              3.90e+17
=====

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IPython Console History

conda: base (Python 3.10.9) Completions: conda LSP: Python Line 48, Col 24 UTF-8 CRLF RW Mem 70%

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Spyder (Python 3.10)

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28 y_pred = regressor.predict(X_test)
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31 constant
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33 slope = regressor.coef_
34 slope
35
36 import statsmodels.formula.api as sm
37
38 X = np.append(arr = np.ones((21613,1)).astype(int), values = X, axis = 1)
39
40
41 import statsmodels.api as sm
42 X_opt = X[:,[0,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,]]
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50 X_opt = X[:,[0,1,2,5,6,7,8,9,10,11,12,13,14,15,16,17,18,]]
51 regressor_OLS = sm.OLS(endog=y, exog=X_opt).fit()
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54 X_opt = X[:,[0,1,5,6,7,8,9,10,11,12,13,14,15,16,17,18,]]
55 regressor_OLS = sm.OLS(endog=y, exog=X_opt).fit()
56 regressor_OLS.summary()
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58
59

```

Variable Explorer

Name	Type	Size	Value
constant	float64	1	4166134.7323275423

Console 1/A X

Covariance Type: nonrobust

	coef	std err	t	P> t	[0.025	0.975]
const	6.602e+06	2.94e+06	2.246	0.025	8.4e+05	1.24e+07
x1	-3.121e+04	1861.659	-16.764	0.000	-3.49e+04	-2.76e+04
x2	1.831e+04	3484.768	5.256	0.000	1.15e+04	2.51e+04
x3	5.811e+05	1.74e+04	33.349	0.000	5.47e+05	6.15e+05
x4	5.359e+04	2146.611	24.965	0.000	4.94e+04	5.78e+04
x5	2.826e+04	2354.774	12.000	0.000	2.36e+04	3.29e+04
x6	9.817e+04	2153.775	45.581	0.000	9.4e+04	1.02e+05
x7	196.4340	3.488	56.311	0.000	189.597	203.271
x8	173.4676	4.002	43.347	0.000	165.624	181.312
x9	-2327.2257	68.841	-33.806	0.000	-2462.159	-2192.292
x10	25.7999	3.637	7.094	0.000	18.671	32.929
x11	-589.6931	33.107	-17.812	0.000	-654.585	-524.801
x12	6.045e+05	1.08e+04	56.144	0.000	5.83e+05	6.26e+05
x13	-2.159e+05	1.32e+04	-16.415	0.000	-2.42e+05	-1.9e+05
x14	19.7756	3.452	5.729	0.000	13.010	26.542
x15	-0.2662	0.053	-4.994	0.000	-0.371	-0.162

Omnibus: 18392.176 Durbin-Watson: 1.990
 Prob(Omnibus): 0.000 Jarque-Bera (JB): 187000.798
 Skew: 3.569 Prob(JB): 0.00
 Kurtosis: 48.007 Cond. No. 2.12e+08

Python Console History

conda: base (Python 3.10.9) Completions: conda LSP: Python Line 59, Col 1 UTF-8 CRLF RW Mem 70%

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