Program Summary - Linear Regression

Execution Environment

Author:	u64091879
File:	
SAS Platform:	Linux LIN X64 5.14.0-284.30.1.el9_2.x86_64
SAS Host:	ODAWS01-USW2-2.ODA.SAS.COM
SAS Version:	9.04.01M7P08062020
SAS Locale:	en_GB
Submission Time:	20/11/2024, 20:47:37
Browser Host:	128.172.245.74
User Agent:	Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_7) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/131.0.0.0 Safari/537.36
Application Server:	ODAMID00-USW2-2.ODA.SAS.COM

Code: Linear Regression

```
/*
 *
 * Task code generated by SAS Studio 3.8
 *
 * Generated on '20/11/2024 20:47'
 * Generated by 'u64091879'
 * Generated on server 'ODAWS01-USW2-2.ODA.SAS.COM'
 * Generated on SAS platform 'Linux LIN X64 5.14.0-284.30.1.el9_2.x86_64'
 * Generated on SAS version '9.04.01M7P08062020'
 * Generated on browser 'Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_7) AppleWebKit/537.36 (KHTML, like Gecko)
 * Generated on web client 'https://odamid-usw2-2.oda.sas.com/SASStudio/main?locale=en_GB&zone=GMT-05%253A00&htt
 *
 */

ods noproctitle;
ods graphics / imagemap=on;

proc reg data=INFO664.IMPUTE alpha=0.05 plots(only)=(diagnostics residuals
        observedbypredicted);
    model 'Real0World CO2 (g/mi)'n='Transmission 0 Automatic'n
        'Transmission 0 Manual'n 'Weight (lbs)'n 'Engine Displacement'n
        'Horsepower (HP)'n Cylinders 'Real0World MPG'n /;
    run;
quit;
```

Log: Linear Regression

Notes (6)

```
1           OPTIONS NONOTES NOSTIMER NOSOURCE NOSYNTAXCHECK;
NOTE: ODS statements in the SAS Studio environment may disable some output features.
69
70          /*
71           *
72           * Task code generated by SAS Studio 3.8
73           *
74           * Generated on '20/11/2024 20:47'
75           * Generated by 'u64091879'
76           * Generated on server 'ODAWS01-USW2-2.ODA.SAS.COM'
77           * Generated on SAS platform 'Linux LIN X64 5.14.0-284.30.1.el9_2.x86_64'
78           * Generated on SAS version '9.04.01M7P08062020'
79           * Generated on browser 'Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_7) AppleWebKit/537.36 (KHTML, like Gecko)
79        ! Chrome/131.0.0.0 Safari/537.36'
80           * Generated on web client
80        ! 'https://odamid-usw2-2.oda.sas.com/SASStudio/main?locale=en_GB&zone=GMT-05%253A00&https%3A%2F%2Fodamid-usw2-2.oda.s
80        ! %2FSASStudio%2Findex='
81           *
82           */
83
84          ods noproctitle;
85          ods graphics / imagemap=on;
86
87          proc reg data=INFO664.IMPUTE alpha=0.05 plots(only)=(diagnostics residuals
88          observedbypredicted);
89          model 'Real0World CO2 (g/mi)'n='Transmission 0 Automatic'n
90          'Transmission 0 Manual'n 'Weight (lbs)'n 'Engine Displacement'n
91          'Horsepower (HP)'n Cylinders 'Real0World MPG'n /;
92          run;

NOTE: HTML data tips have been disabled for at least one plot because the threshold has been reached. You can set TIPMAX=4200
      the ODS GRAPHICS statement to produce data tips for all plots.
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```

```
         the ODS GRAPHICS statement to produce data tips for all plots.
93       quit;

NOTE: PROCEDURE REG used (Total process time):
      real time              3.16 seconds
      user cpu time          0.34 seconds
      system cpu time        0.06 seconds
      memory                 21353.65k
      OS Memory              42216.00k
      Timestamp              21/11/2024 01:47:37 AM
      Step Count                    24  Switch Count  66
      Page Faults                   0
      Page Reclaims                 20217
      Page Swaps                    0
      Voluntary Context Switches    2185
      Involuntary Context Switches  18
      Block Input Operations        0
      Block Output Operations       15728


94
95       OPTIONS NONOTES NOSTIMER NOSOURCE NOSYNTAXCHECK;
105
```

Results: Linear Regression
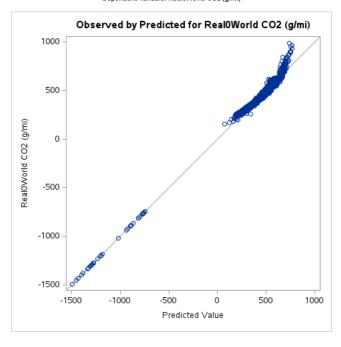
Model: MODEL1
Dependent Variable: Real0World CO2 (g/mi)

Number of Observations Read	4162
Number of Observations Used	4162

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	132103877	18871982	45816.0	<.0001
Error	4154	1711067	411.90833		
Corrected Total	4161	133814944			

Root MSE	20.29552	R-Square	0.9872
Dependent Mean	413.72022	Adj R-Sq	0.9872
Coeff Var	4.90562		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	581.12198	6.52794	89.02	<.0001
Transmission 0 Automatic	1	81.09722	1.94597	41.67	<.0001
Transmission 0 Manual	1	59.19794	2.26210	26.17	<.0001
Weight (lbs)	1	0.02291	0.00109	21.02	<.0001
Engine Displacement	1	0.40748	0.01787	22.80	<.0001
Horsepower (HP)	1	-0.09421	0.01218	-7.73	<.0001
Cylinders	1	-1.61981	0.91933	-1.76	0.0782
Real0World MPG	1	-14.51743	0.11290	-128.59	<.0001

Model: MODEL1
Dependent Variable: Real0World CO2 (g/mi)

Fit Diagnostics for Real0World CO2 (g/mi)

Residual by Regressors for Real0World CO2 (g/mi)

Residual by Regressors for Real0World CO2 (g/mi)