

JMP Stepwise Procedures for Highway MPG Data

Response: Highway MPG

Explanatory: Sports Car, SUV, Wagon, Minivan, All Wheel, Rear Wheel, Engine, Cylinders, Horsepower, Weight, Wheel Base, Length, Width

Stepwise Regression Control

Prob to Enter 0.050

Prob to Leave 0.050

Direction: Forward

Current Estimates

SSE	DFE	MSE	RSquare	RSquare Adj	Cp	AIC
1268.269	96	13.211136	0.6543	0.6435	12.122214	262.0238

Parameter	Estimate	nDF	SS	"F Ratio"	"Prob>F"
Intercept	33.0251054	1	0	0.000	1.0000
Sports Car	0	1	6.928014	0.522	0.4719
SUV	0	1	48.78157	3.800	0.0542
Wagon	0	1	1.952058	0.146	0.7028
Minivan	0	1	9.296884	0.702	0.4044
All Wheel	0	1	45.27064	3.517	0.0638
Rear Wheel	0	1	2.570807	0.193	0.6615
Engine	0	1	38.31665	2.960	0.0886
Cylinders	0	1	31.96371	2.456	0.1204
Horsepower	-0.0257556	1	181.8159	13.762	0.0003
Weight	-0.0062597	1	703.0322	53.215	0.0000
Wheel Base	0.20569376	1	106.6696	8.074	0.0055
Length	0	1	3.045635	0.229	0.6336
Width	0	1	0.141521	0.011	0.9182

Step History

Step	Parameter	Action	"Sig Prob"	Seq SS	RSquare	Cp	p
1	Weight	Entered	0.0000	2065.965	0.5631	35.606	2
2	Horsepower	Entered	0.0001	228.0966	0.6253	18.88	3
3	Wheel Base	Entered	0.0055	106.6696	0.6543	12.122	4

Direction: Backward

Current Estimates

SSE	DFE	MSE	RSquare	RSquare Adj	Cp	AIC
1146.8151	94	12.200161	0.6874	0.6708	6.151101	255.9574

Parameter	Estimate	nDF	SS	"F Ratio"	"Prob>F"
Intercept	43.5501018	1	0	0.000	1.0000
Sports Car	0	1	22.677	1.876	0.1741
SUV	-4.9350964	1	230.5484	18.897	0.0000
Wagon	0	1	3.239053	0.263	0.6090
Minivan	-4.2562699	1	141.4604	11.595	0.0010

Parameter	Estimate	nDF	SS	"F Ratio"	"Prob>F"
All Wheel	-2.674427	1	95.75119	7.848	0.0062
Rear Wheel	0	1	10.81537	0.885	0.3492
Engine	0	1	13.31194	1.092	0.2987
Cylinders	-1.3933688	1	127.8662	10.481	0.0017
Horsepower	-0.0297786	1	170.5613	13.980	0.0003
Weight	0	1	20.39484	1.684	0.1976
Wheel Base	0	1	4.623746	0.376	0.5410
Length	0	1	0.159931	0.013	0.9096
Width	0	1	2.552708	0.207	0.6498

Step History

Step	Parameter	Action	"Sig Prob"	Seq SS	RSquare	Cp	p
1	Length	Removed	0.6466	2.579335	0.7138	12.212	13
2	Rear Wheel	Removed	0.6784	2.088733	0.7132	10.383	12
3	Wagon	Removed	0.4941	5.636558	0.7117	8.846	11
4	Width	Removed	0.4902	5.704726	0.7101	7.3143	10
5	Engine	Removed	0.4246	7.603433	0.7081	5.9386	9
6	Wheel Base	Removed	0.3576	10.06508	0.7053	4.7649	8
7	Weight	Removed	0.0591	42.93028	0.6936	6.2894	7
8	Sports Car	Removed	0.1741	22.677	0.6874	6.1511	6

Direction: Mixed

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