

Fit: Pulse1

Pulse rates before and after exercise

<http://www.statsci.org/data/oz/ms212.html>

Last updated 2 February 2016 at 13:32 by Analyse-it Software, Ltd.

Fit

N	109
R ²	0.144
R ² adjusted	0.067
SE of fit (RMSE)	12.85

Parameter	Estimate	95% CI	SE	VIF
Constant	123.3	91.13 to 155.5	16.229	-
Height	-0.2188	-0.4101 to -0.02747	0.096419	1.59
Weight	-0.01951	-0.2518 to 0.2128	0.11708	2.08
Age	-0.5041	-1.163 to 0.1545	0.33194	1.12
Gender: 1	0.5860	-2.567 to 3.739	1.5889	-
Gender: 2	-0.5860	-3.739 to 2.567	1.5889	1.66
Smokes: 1	0.3794	-3.866 to 4.625	2.1398	-
Smokes: 2	-0.3794	-4.625 to 3.866	2.1398	1.10
Alcohol: 1	1.251	-1.560 to 4.062	1.4167	-
Alcohol: 2	-1.251	-4.062 to 1.560	1.4167	1.26
Exercise: 1	-5.539	-10.78 to -0.2948	2.6427	-
Exercise: 2	1.593	-1.943 to 5.130	1.7822	1.04
Exercise: 3	3.945	-0.1036 to 7.994	2.0406	1.16
Ran: 1	-0.3319	-2.855 to 2.191	1.2716	-
Ran: 2	0.3319	-2.191 to 2.855	1.2716	1.04

Effect of Model

Source	SS	DF	MS	F	p-value
Difference	2757.8	9	306.4	1.86	0.0674 ¹
Error	16339.6	99	165.0		
Null model	19097.4	108	176.8		

H0: $E(Y|X=x) = \mu$

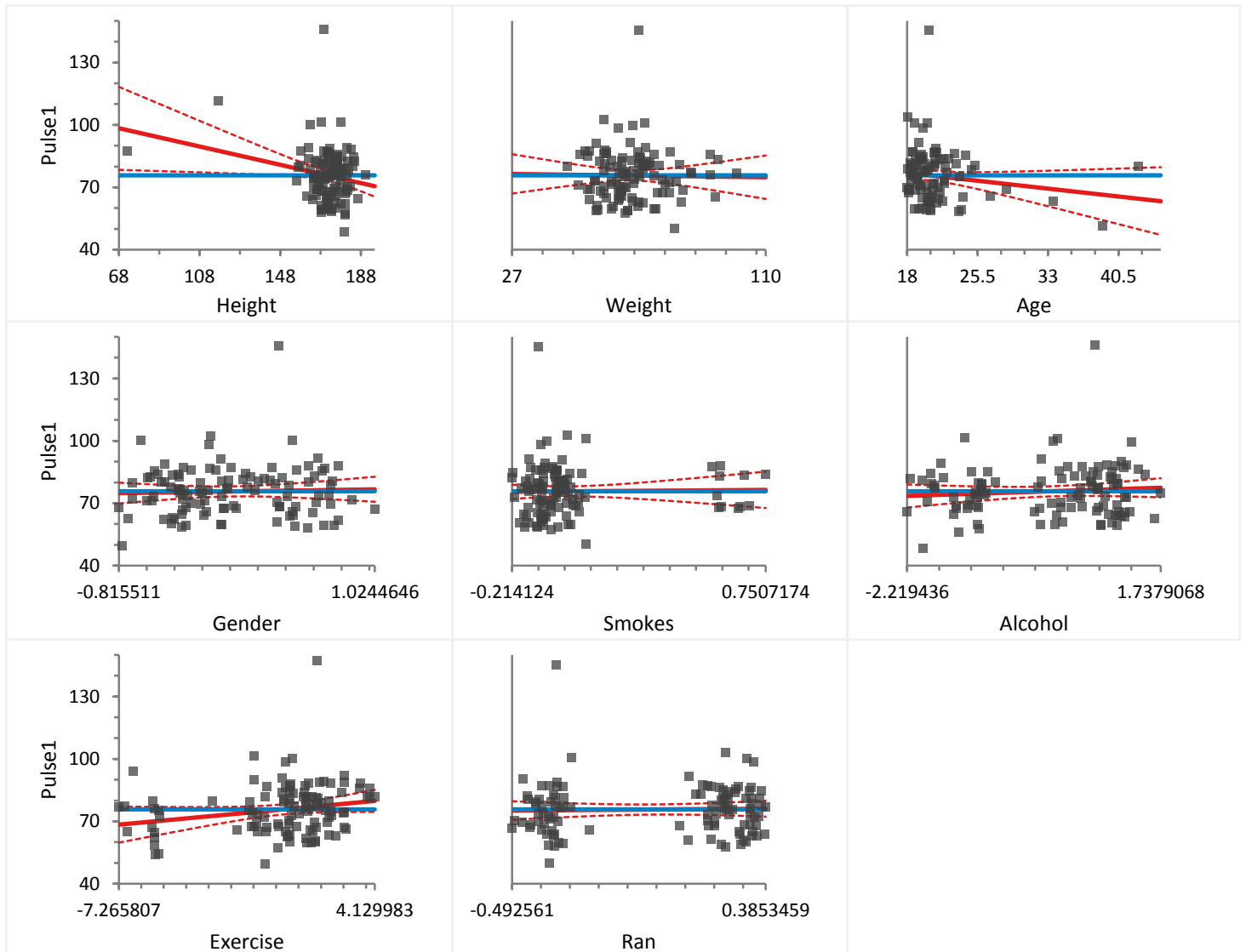
The model is no better than a null model $Y=\mu$.

H1: $E(Y|X=x) = \beta_0 + \beta_1x_1 + \beta_2x_2 + \dots$

The model is better than the null model.

¹ Do not reject the null hypothesis at the 5% significance level.

Effect of Terms



Term	SS	DF	MS	F	p-value
Height	849.8	1	849.8	5.15	0.0254 ¹
Weight	4.6	1	4.6	0.03	0.8680 ²
Age	380.7	1	380.7	2.31	0.1320 ²
Gender	22.5	1	22.5	0.14	0.7131 ²
Smokes	5.2	1	5.2	0.03	0.8596 ²
Alcohol	128.8	1	128.8	0.78	0.3792 ²
Exercise	778.7	2	389.3	2.36	0.0998 ²
Ran	11.2	1	11.2	0.07	0.7946 ²

H0: $\beta_{Term} = 0$

The term does not contribute to the model.

H1: $\beta_{Term} \neq 0$

The term contributes to the model.

¹ Reject the null hypothesis in favour of the alternative hypothesis at the 5% significance level.

² Do not reject the null hypothesis at the 5% significance level.

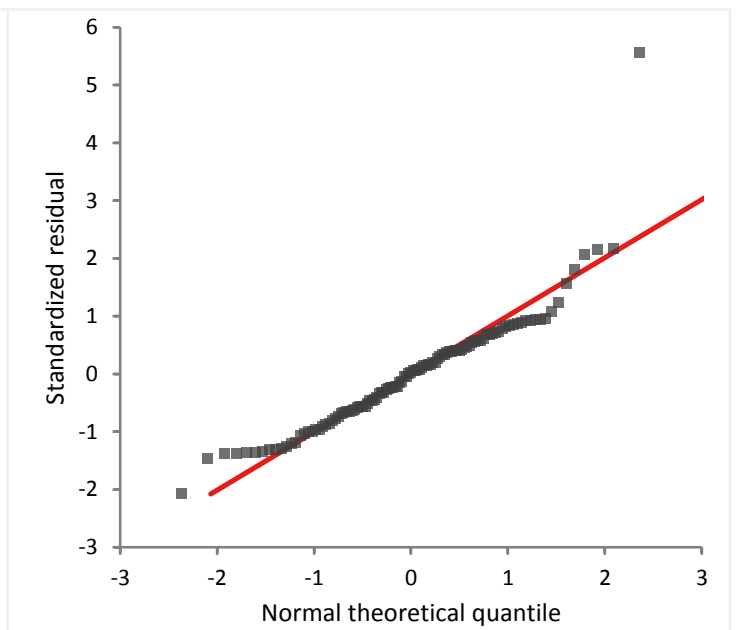
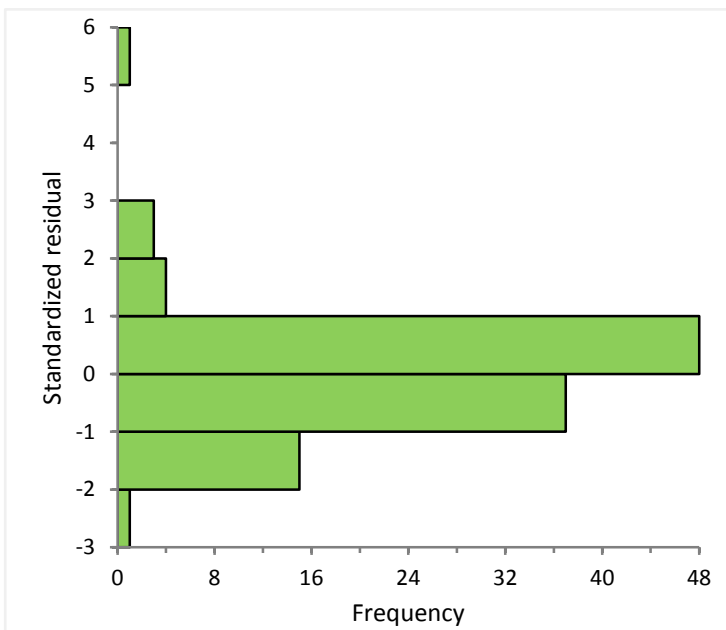
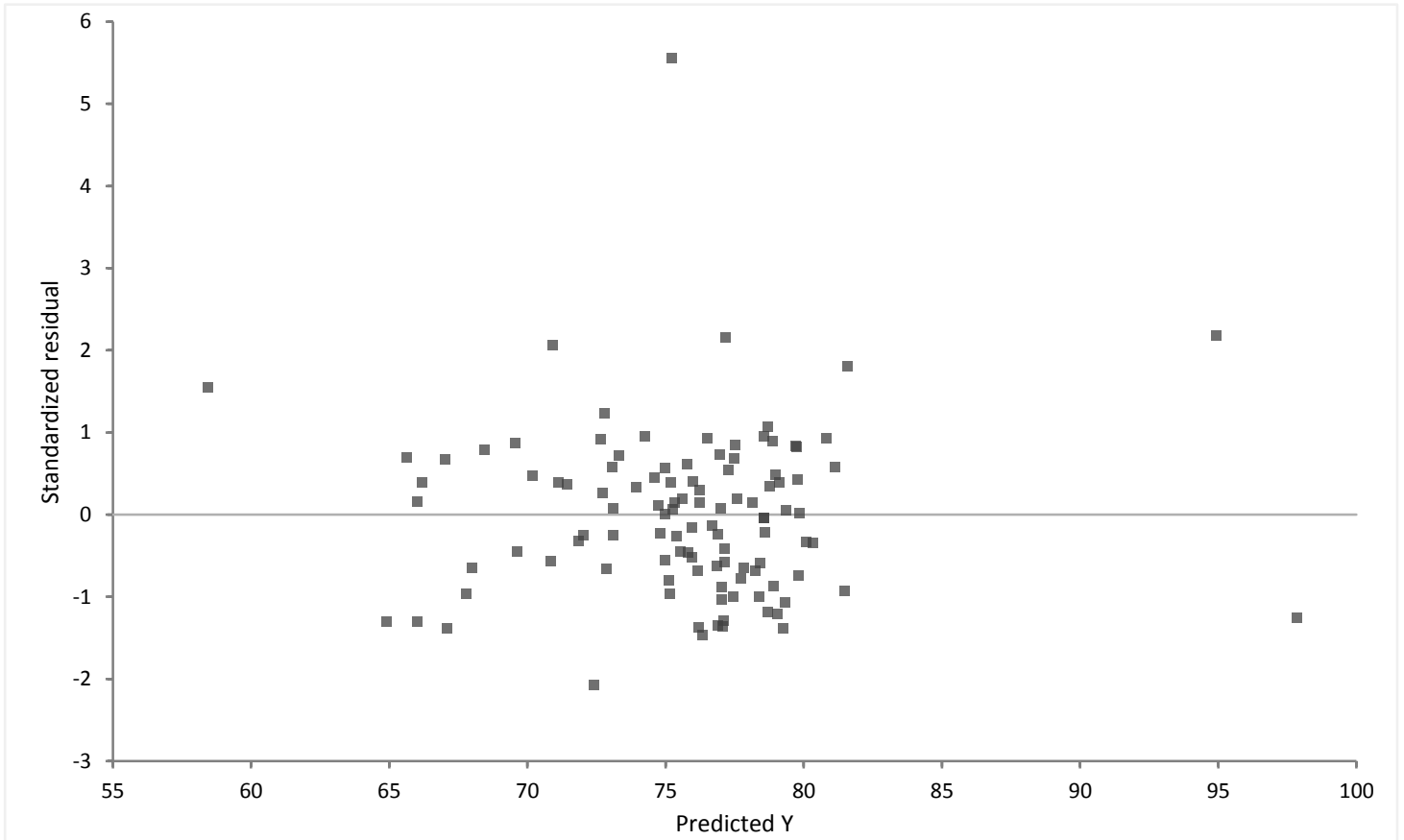
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Residuals



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Outliers, Leverage, Influence

