PS8$_{R}einsch$

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1 Optimization

Regression Output

Betaols = 0.775. It is very close to the true value of beta = 0.7748.

In this simple linear regression, beta1 (X1)=0.775. For every one unit increase in beta1, Y increases by 0.775. The true value of beta (betaTrue)=0.7748. Each optimization test I ran produced beta1 values of approximately 0.775 (Gradient Descent, LBFGS OLS, Nelder-Mead OLS, and LBFGS MLE).

	Model 1
X1	0.775
	(0.002)
X2	0.496
	(0.003)
X3	0.515
	(0.003)
X4	0.600
	(0.003)
X5	0.709
	(0.003)
X6	0.967
	(0.003)
X7	0.313
	(0.003)
X8	0.036
	(0.003)
X9	0.624
	(0.003)
X10	0.859
	(0.003)
Num.Obs.	1e+05
R2	0.856
R2 Adj.	0.856
AIC	144993.2
BIC	145097.9
Log.Lik.	-72485.615
F	59605.045