PS8 Yarberry

Megan N. Yarberry

March 24, 2020

1 Question

Based off the two functions the nloptr's L-BFGS algorithm and Nelder-Mead algorithm, my answers did not differ between the two methods.

2 Question

How similar your estimates of Betaˆ are to the "ground truth" Beta that you used to create the data in table 1?

The values are similar but are off by a couple of digits, and not completely the same, since they were run differently.

Table 1:

	Dependent variable:
	Y
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)
Observations	100,000
R^2	0.856
Adjusted R^2	0.856
Residual Std. Error	0.500 (df = 99990)
F Statistic	59,605.040*** (df = 10; 99990)
Note:	*p<0.1; **p<0.05; ***p<0.01