PS8

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1 Introduction

Table 1:

1.501
-0.991
-0.247
0.744
3.504
-1.999
0.502
0.997
1.256
1.999

OLS

Table 2:

1.501	-0.991	-0.247	0.744	3.504	-1.999	0.502	0.997	1.256	1.999

The gradient descent method.

Table 3:

1.501	-0.991	-0.247	0.744	3.504	-1.999	0.502	0.997	1.256	1.999

We can then do the regression estimate with the LBFGS method and the Nelder Mead method. The Nelder Mead is far less accurate than the LBFGS method.

The MLE estimate

Table 4:

1.462	-0.977	-0.234	0.775	3.507	-1.971	0.537	0.971	1.243	2.002

Table 5:

1.501	-0.991	-0.247	0.744	3.504	-1.999	0.502	0.997	1.256	1.999	-0.500

Table 6:

	Dependent variable:
	y
X1	1.501***
	(0.002)
X2	−0.991***
	(0.003)
X3	−0.247***
	(0.003)
X4	0.744***
	(0.003)
X5	3.504***
	(0.003)
X6	−1.999***
	(0.003)
X7	0.502***
	(0.003)
X8	0.997***
	(0.003)
X9	1.256***
	(0.003)
X10	1.999***
	(0.003)
Observations	100,000
R^2	0.971
Adjusted R^2	0.971
Residual Std. Error	0.500 (df = 99990)
F Statistic	338,240.000*** (df = 10; 99990)

Note: *p<0.1; **p<0.05; ***p<0.01