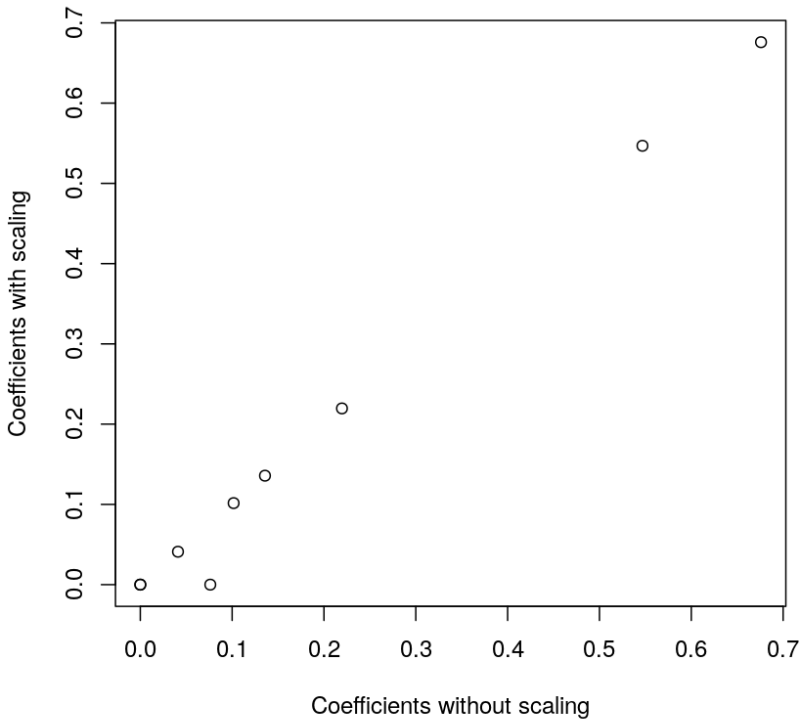
Feature selection for regression

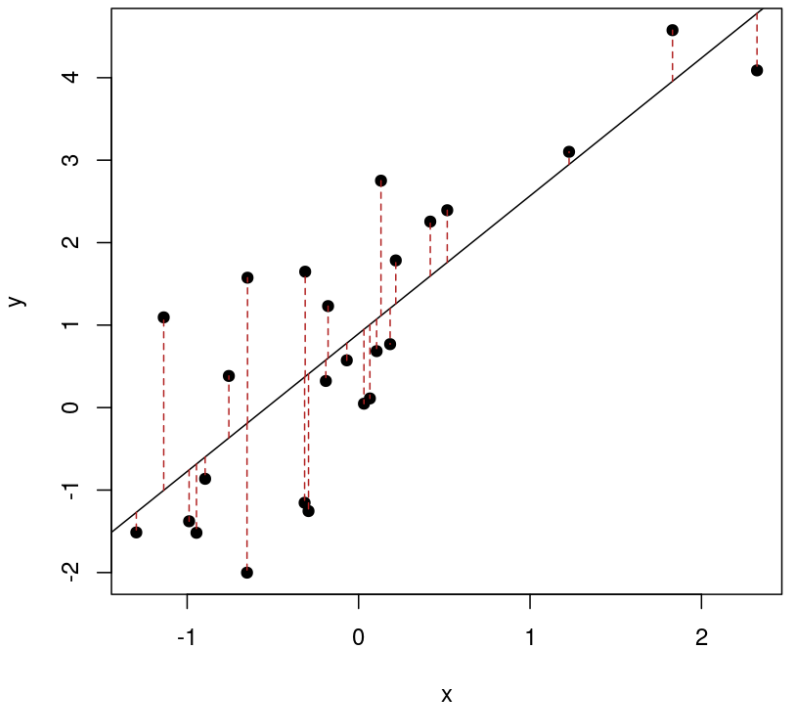
Cap

Setting	BS	FS
low ($n = 100$, $p = 10$, $s = 5$)	3.43	0.006
medium ($n = 500$, $p = 100$, $s = 5$)	≈ 120 *min*	0.818
high-5 ($n = 50$, $p = 1000$, $s = 5$)	≈ 126 *min*	0.137
high-10 ($n = 100$, $p = 1000$, $s = 10$)	≈ 144 *min*	0.277

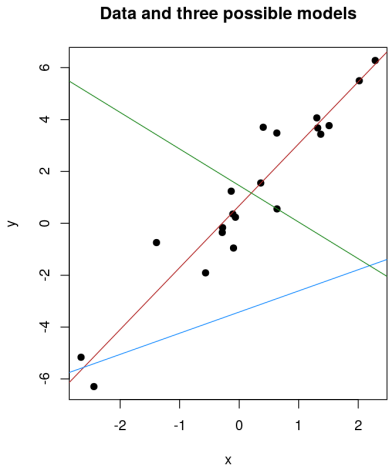
Cap

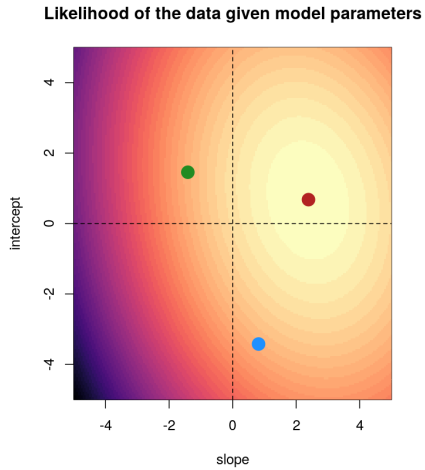

Coefficients with scaling
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
Coefficients without scaling
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7

Cap



Cap


Data and three possible models
y
x
6
4
2
0
-2
-4
-6
-2
-1
0
1
2


Likelihood of the data given model parameters
intercept
slope
4
2
0
-2
-4
-4
-2
0
2
4