

In the table below it is presented the impact of changing iterations and learning rates on costs. Results show that both iteration and learning rate have an impact on cost. It is worth noting that when both of them increase the cost increases a lot (in the below case of 30% increase the cost is infinite). It is also noticed that when iteration increases and learning rate decreases the impact on cost is much lower than the case where iteration decreases and learning rate increases; this shows that learning rate has a greater impact on cost.

Iteration	Learning rate	Cost
100	0.08	0.004
70 (reduce 30%)	0.056 (reduce 30%)	0.067
130 (increase 30%)	1.04 (increase 30%)	Inf
70 (reduce 30%)	1.04 (increase 30%)	2.678
130 (increase 30%)	0.056 (reduce 30%)	0.044
130 (increase 30%)	0.08 (stable)	0.041
70 (reduce 30%)	0.08 (stable)	0.213
100 (stable)	1.04 (increase 30%)	2.980
100 (stable)	0.056 (reduce 30%)	0.021