theory6

by Kondrashov Anton

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1   Task

The algorithm the student wrote is non-convergent. Initial weights are zeroes and that's why the if condition is always false. Therefore the loop becomes infinite.

2   Task

The only point of standardization for logistic regression is faster convergence. So it won't change the resulting classification model.
When using L2 regularization the standardization is necessary because the magnitude of individual features shouldn't affect the regularization behaviour.

3   Task

As it was said in the previous task, standardization for logistic regression does affect stability and convergence.