

Metrics optimization
Reading: Overview 10 min
Video: Minimization 8 min
Video: Regression metrics review I 14 min
Notebook: Containers for MSE and MAE 10 min
Video: Regression metrics review II 8 min
Notebook: A note about weighted median 10 min
Video: Classification metrics review 20 min
Video: General approaches for metrics optimization 6 min
Video: Regression metrics optimization 10 min
Video: Classification metrics optimization I 7 min
Video: Classification metrics optimization II 6 min
Notebook: "Soft kapp" Brier index calculation 5 min
Practice Quiz: Metrics 6 questions
Quiz: Metrics 6 questions
Reading: Comments on quiz 10 min
Reading: Additional material and links 10 min
Mean encodings

# Metrics

**QUIZ • 10 MIN**

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## Metrics

TOTAL POINTS 6

- Suppose we solve a binary classification task and our solution is scores with `logloss`. What predictions are more preferable in terms of logloss if true labels are `y_true = [0, 0, 0, 0]`?
 

☐ `y_pred = [0.4, 0.5, 0.5, 0.6]`
☐ `y_pred = [0.5, 0.5, 0.5, 0.5]`
☐ `y_pred = [0.5, 0, 0, 1]`
- Suppose we solve a regression task and we optimize MSE error. If we managed to lower down MSE loss on either train set or test set, how did we change Pearson correlation coefficient between target vector and the predictions on the same set?
 

☐ The correlation became larger.
 ☐ The correlation did not change.
 ☐ The correlation was also lowered.
 ☐ Any behavior is possible.
- What would be a best constant prediction for a following multi-class classification task with 4 classes? The solution is scored with multi-class logloss. The number of objects of each class in train set is 10, 9, 15, 24.  
Enter four comma separated values. Round each to two decimal places and use a leading zero before a fractional part (e.g. "0.50"; not ".5").  

Enter answer here
- What is the best constants predictor for R-squared metric?
 

☐ Target mean divided by target variance
 ☐ Target mean
 ☐ 0.5
 ☐ (log of target mean) + 1
 ☐ One minus target mean
- Select the correct statements.
 

☐ Optimization loss is always the same as target metric.
 ☐ Optimization loss can differ from target metric.
 ☐ Optimization loss can be the same as target metric.
 ☐ Optimization loss is always different to target metric.
- Suppose the target metric is M1, and optimization loss is M2. We train a model and monitor its quality on a holdout set using metrics M1 and M2.  
Select the correct statements.
 

☐ There is no definite relation between the best iterations for M1 score and M2 score.
 ☐ If the best M1 score is attained at iteration N, then the best M2 score is always attained also at the iteration N.
 ☐ If the best M1 score is attained at iteration N, then the best M2 score is always attained after N-th iteration.
 ☐ If the best M1 score is attained at iteration N, then the best M2 score is always attained before N-th iteration.

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