Metrics

Quiz, 6 questions

1 point

1.
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, 0, 0, 1]
- y_pred = [0.5, 0.5, 0.5, 0.5]
- y_pred = [0.4, 0.5, 0.5, 0.6]

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1 point

2.
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 was also lowered.
- Any behavior is possible.
- The correlation did not change.
- The correlation became larger.

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1 point

3.
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: 18, 3, 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").

0.30, 0.05, 0.25, 0.40

1 point

4.
What is the best constant predictor for R-squared metric?

- [ ] One minus target mean
- [ ] 0.5
- [ ] (Log of target mean) + 1
- [x] Target mean
- [ ] Target mean divided by target variance

1 point

5.
Select the correct statements.

- [ ] Optimization loss is always different to target metric.
- [ ] Optimization loss is always the same as target metric.
- [x] Optimization loss can different to target metric.
- [x] Optimization loss can be the same as target metric.

1 point

6.
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.

- ( ) 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.

- (●) 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.

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