

Machine Learning and Data Mining

Course logistics

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Structure

- ❖ lecture;
- ❖ seminars:
 - ❖ exercises;
 - ❖ Q'n'A;
 - ❖ student presentations.
- ❖ unfinished classwork becomes homework;
- ❖ all materials will appear in github.com/HSE-LAMBDA/Machine-Learning-Data-Mini

Course

Three parts:

- ❖ traditional learning;
- ❖ deep learning;
- ❖ 'big' learning.

Final grades

$$\text{Final grade} = 50\% \cdot \text{homeworks} + 50\% \cdot \text{exam}$$

$$\text{Final grade} = \left[\frac{5}{3} \cdot \text{homework score} + \frac{1}{2} \cdot \text{exam score} \right]$$

where:

- ❖ homework score - sum of all marks for the homeworks (max 1 per each, max 3 total);
- ❖ exam score - mark on the exam, max 10.

Homeworks

Homework per course part:

- ❑ a boosting exercise;
- ❑ an exercises with Deep Neural Networks;
- ❑ a Spark exercise.

Exam

Exam:

- ❖ a presentation on Machine Learning challenge you took part in:
 - ❖ a non-trivial solution;
 - ❖ elaborate on method/features/... you chose.
- ❖ mini-lecture on advance topic:
 - ❖ e.g. a notable advanced paper;
 - ❖ some suggestions will be on lectures;
- ❖ mini-seminar on machine learning technology/library:
 - ❖ e.g. TensorFlow, parallel XGBoost.

**Please, discuss with me your choice beforehand,
send me draft of your presentation/lecture/seminar in
advance.**