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-Mining-2017`

Course

Three parts:

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

Final grades

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

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

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:

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

Exam

Exam:

- presentation on Machine Learning challenge you took part in:
  - a non-trivial solution;
  - ellaborate 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.