Machine learning

1. Supervised learning
   - Text classification
   - Sequence labeling
   - Structure learning
   - Sequence to sequence
   - Learning to rank
2. Unsupervised learning
   - Cluster analysis
   - Embedding models
   - Topic modelling
3. Reinforcment learning
4. Other learning paradigms:
   - Semi-supervised learning
   - Active learning

This course

1. Classics:
   - `from sklearn import *`
   - Text classification and text clustering
   - Topic modelling
   - Word and sentence embeddings
2. Basics: deep learning for NLP
   - Convolutional neural networks
   - Recurrent neural networks for language modelling and sequence labelling
   - Structure learning: syntax parsing
   - Encoder-decoder models for machine translation and image captioning
3. Advanced topics:
   - Transfer learning and multi-task learning
   - Reinforcement learning
   - Bayesian methods

This course

1. Team:
   - TA's: Taisiya Glushkova (@glushkovato), Amir Bakarov (@xdefeaterx)
   - Seminars: Maria Ponomoreva (@MashPo), Oksana Dereza (@ancatmara)
   - Lectures: Katya Artemova (@eartemova) plus invited lecturers
2. Schedule: Wednesday, 18:00
3. Repo: `https://github.com/echernyak/ML-for-compling`
4. 5 homeworks, 20 points each
   (10 points + 10 bonus points, 0.2 bonus points add to 0.8 avg hw)
5. $O_{nakop} = 0.8\ avg\ hw + 0.2\ quiz$
   $O_{final} = 0.7\ O_{nakop} + 0.3 O_{exam}$
   $O_{nakop} \geq 8 \rightarrow no\ exam$