

Machine Learning and Data Mining

Meta-learning, seminar

Maxim Borisyak

2016/09/29

National Research University
Higher School of Economics



HIGHER SCHOOL OF ECONOMICS
NATIONAL RESEARCH UNIVERSITY

On MNIST dataset (using images of 1s and 0s):

- train Logistic Regression:
 - without regularization;
 - with l_2 regularization, varying regularization constant (λ);
 - with l_1 regularization, varying regularization constant (λ).
- make a plot of models' coefficients depending on regularization constant;
- perform feature selection using l_1 regularization;
- train weakly regularized Logistic Regression on selected features.
- compare accuracy of all trained models (accuracy vs. λ or number of selected features).

⁰One can downsample images: select only one pixel in e.g. 2x2 window.