

Statistical Learning Methods [223490-0286], spring 2016/17

Lectures

Teachers:

- Bogumił Kamiński, <http://bogumilkaminski.pl> lectures
- Artur Płuska, Michał Kot, Beata Koń laboratories

Schedule:

- Lectures: Aula VII, Mondays, 8:00 – 10:35
- Laboratories: A-113, Mondays, 17:10–18:50 and 19:00–20:40; Thursdays, 17:10–18:50

Lectures

Date	Subject
20-02-17	Introduction to R programming
27-02-17	Introduction to statistical learning
06-03-17	Fundamentals of prediction modeling
13-03-17	Methods of evaluation of classifier quality
20-03-17	Advanced methods of building of stable prediction models
27-03-17	Methods of selection of form of forecasting model specification
03-04-17	Nonparametric regression models
10-04-17	Classical machine learning models: CART and ANN
24-04-17	Causal inference: introduction
08-05-17	Causal inference: algorithms
15-05-17	Case study: beer game
22-05-17	Unsupervised learning
29-05-17	Methods of time series forecasting
05-06-17	Applications of predictive modeling + written examination

Laboratories

Lab #	Subject
1	Introduction to R programming
2	Methods of evaluation of classifiers
3	Classification competition
4	Nonparametric regression models: smoothing spline, LOESS, GAM
5	Classical machine learning models: CART, random forest
6	Regression competition
7	Review of material and computer examination

Textbooks

- Gareth J., Witten D., Hastie T., Tibshirani R. (2013), An Introduction to Statistical Learning with Applications in R (<http://www-bcf.usc.edu/~gareth/ISL/>)
- Hastie T., Tibshirani R., Friedman J. (2013), The Elements of Statistical Learning (<http://www-stat.stanford.edu/~tibs/ElemStatLearn/>)
- Optionally (in Polish): Kamiński B., Zawisza M. (2012), Receptury w R. Podręcznik dla ekonomisty, Oficyna Wydawnicza SGH (<http://bogumilkaminski.pl/projekty/>)

Grading rules

Elements of grade:

- Written examination (maximally 50 points):
 - Test questions without negative points
 - During last lecture
 - It is allowed to have textbooks
- Practical examination (maximally 50 points):
 - During last laboratory, R code writing test at the computer
 - It is allowed to have textbooks

Rules for final grade calculation:

Number of points		Final grade
Od	Do	
0	49	2.0
50	59	3.0
60	69	3.5
70	79	4.0
80	89	4.5
90	100	5.0