

- parameter estimation with stochastic gradient descent
- Keras en Tensorflow libraries
- Deep Learning for text: recurrentneural networks

Initial competences

Students need to have a thorough understanding of the basic statistical principles and concepts as treated in the course "Data Mining" and experience with the programming language R.

Final competences

- 1 Understand the most important methods and models in the field of Machine Learning
- 2 Apply these in a correct way, using the programming language R
- 3 Interpret and report the results of the analyses in a meaningful way
- 4 Choose the most relevant and appropriate methodology for a specific business problem, while being aware of the advantages and disadvantages of the chosen approach.

Conditions for credit contract

Access to this course unit via a credit contract is determined after successful competences assessment

Conditions for exam contract

This course unit cannot be taken via an exam contract

Teaching methods

Online lecture, Online seminar: practical pc room classes, Guided self-study, Lecture, Project, Seminar: practical pc room classes

Extra information on the teaching methods

The learning management system Ufora will be used to guarantee a swift organisation of the course. We will make use of flipped classroom and exercises are made on the Dodona platform.

Learning materials and price

All learning materials will be made available on Ufora.

References

- James, G., Witten, D., Hastie, T. & Tibshirani, R. (2015) An Introduction to Statistical Learning with Applications in R, Springer.
- Hastie, T., Tibshirani, R. & Freedman, J. (2008) The elements of Statistical Learning, Springer.
- Chollet, F. & Allaire J. (2018) Deep Learning with R, Manning Publications.

Course content-related study coaching

Students can rely on the teaching assistants and teacher of the course. Communications and interaction through the Ufora and Dodona platforms.

Assessment moments

end-of-term and continuous assessment

Examination methods in case of periodic assessment during the first examination period

Written examination

Examination methods in case of periodic assessment during the second examination period

Written examination

Examination methods in case of permanent assessment

Peer assessment, Assignment

Possibilities of retake in case of permanent assessment

examination during the second examination period is not possible

Extra information on the examination methods

- Periodic evaluation: Theory and exercises: written exam (closed book)
- Non-periodic evaluation: Project work in groups with oral defense and peer-evaluation

Calculation of the examination mark

- Periodic: 50%
- Non-periodic: 50%

