DAIS2022: Assignment #6
Association Rules, Clustering & Self-Organization

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Due: 30.06.2022 8 p.m.

Introduction

This assignment is about learning association rules, clustering and self-organization.

The assignment has 100 points in total, distributed over the tasks. You need to get at least 50 points to pass this assignment.

1 Association Rules: 15 points

Association rule mining is a method to extract relationships between features in a dataset. We are going to have a look at the Apriori algorithm. This task comes in the form of a quiz, where you are asked to solve all the tasks. You can find the quiz on the moodle page or by clicking the following link:
https://lernen.min.uni-hamburg.de/mod/quiz/view.php?id=87114

2 Clustering: 50 points

In this task, we will have an in-depth look at the k-Means algorithm and how we can use it to cluster data in an unsupervised manner. Please do all the tasks specified in the attached Jupyter notebook *kmeans.ipynb*.

3 SOM: 35 points

Self-organizing maps are a powerful type of artificial neural network to discover relationships and structures in data. Please do all the tasks specified in the attached Jupyter notebook *SOM.ipynb*.

4 Next Assignment?

I know, it is very sad, but unfortunately there are no more assignments to prepare for. Good luck with the exam!