

DAIS2021: Assignment #6

Association Rules, Clustering & Self-Organisation

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Introduction

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

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 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=60937>

2 Clustering: 45 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: 40 points

Self-organising 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 not other assignments. Good luck with the exam!