Assignment II
Intelligent Systems

Feature Selection

This assignment will be discussed on December 16, 2020

Again, we offer a practice lesson next Monday 14, 2:15 pm instead of the regular lecture
Join via the regular Zoom link for lecture.

Concept

This is the second of three assignments. It is again mandatory for each group give a brief presentation and hand in your results.

FT I	Preprocessing	✓	Mo, 23.11.2020, 14:15
FT I	Preprocessing Presentation	✓	We, 25.11.2020, 10:15
FT II	Feature Selection		Mo, 14.12.2020, 14:15
FT II	Feature Selection Presentation		We, 16.12.2020, 10:15
FT III	Model Selection		We, 27.01.2021, 10:15
FT III	Model Selection Presentation		We, 27.01.2021, 12:15

Data Basis

Use the preprocessed data from the last assignment. Remember, the overall aim is to predict the waterlevel and the water flow for *main station*, which monitors a river (here in Schleswig-Holstein).

Principal Component Analysis

- Conduct a PCA for the waterlevel data
- Describe your choices for the dimensionality reduction
- Explain or illustrate the impact of the original features of station A, B and C on the new feature space.

Inconsistency Rate

- Create a version of the waterlevel data that is reduced to ordinal values.
- Calculate the IR and use this for feature selection.
- Explain your procedure.

Presentation

The exercise session next Wednesday is reserved for the group presentations as last time. A quick reminder:

- Stick 3 to 4 pages short and take at the most 5 minutes
- Outline the overall approach.
- Present your result: plots, stats, descriptions, ...

Upload your results before the exercise session to *Project Teams* → *Team XY* → *Folder* → *Assignment_2*.

- Your presentation, preferably as a PDF file.
- The Jupyter notebook you used for calculations
- Resulting data files