Pattern Recognition

2015-2016

Lectures: Prof. **Nicolai Petkov**

Computer exercises:
Laura Baakman, Rick van Veen

Lectures: two hours lectures by prof. Petkov

Recommended literature: mostly the book "Pattern Classification" by Hart et al. See Nestor for details and further suggestions.

Computer exercises: compulsory!
Two hours per week with assistance by TAs. Completing an exercise and writing a report will take you more time (8 h?).

Final grade:
50% of grade on written examination
50% of average grade on computer exercises

Each of the above partial grades needs to be **at least 6** in order to pass.

Rounding up or down depends on the grade of the written examination.

For further details, see Nestor.

Content overview

W1: Example applications. Patterns and recognition. Statistical decision theory, iris recognition. Missing features.

W2. Bayesian classification. Parametric classification. Normal distribution.

W3. Maximum likelihood estimation. Non-parametric classification, k-NN.

W4. Learning vector quantization. Cross-validation.

Content overview (cont.)

W5. Clustering and hierarchical clustering.

W6. Independent component analysis.

W7. Decision trees.

W8. Support vector machines.