Pattern Recognition

Exam 4.5.2005

Ari Visa and Ulla Ruotsalainen

1. Describe PCA method (principal component analysis) and how it can be applied in data reduction in pattern classification tasks.

2. You have 20 labelled samples available for training and testing. How do you evaluate the accuracy of the classifier? Motivate your answer.

3. You have an OCR problem to solve and several good, specific classifiers available. How to combine the outputs from the existing classifiers? Motivate your answer and discuss the pros and cons of your suggestion.

4. Compare two unsupervised pattern classification methods: the clustering method and the Bayesian learning method in the case, when a large number of samples is available.