

Exercises to the lecture

Selected areas of Pervasive Computing

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Exercise: 13.11.2013, 16:15 – 17:45

1 Classification and interpretation

In the lecture we have discussed various steps involved in acquiring, processing and interpreting data. Utilise the data in the file 'data.txt' for this exercise to

- pre-process the data
- extract meaningful features
- classify the samples for four distinct classes
- represent the results achieved (e.g. Classification Accuracy, Information Score, Brier score, AUC score).

Please present/sketch the distinct steps you have taken in all cases. For the classification, standard data-mining toolkits can be used¹.

Representation of the data

The file 'data.txt' contains a series of recordings for four classes. The interpretations of the various recordings are as follows:

```
Class: wipe                               Class name
0                                           sampled data
98.077499 -90
98.180648 -91
98.385513 -93
98.92672 -92
98.793425 -88
98.89845 -91
98.999924 -90
99.102279 -88
99.204605 -89
99.307052 -91
EOF 190

-----
Senders: 11
used packets: 148359
Using:
AP 00:0f:61:4f:3e:e1 10 » » [public]
Recording length: 1.229553 s
created units: 13 (1.3s)
new features: 1
-----
```

additional data on the sampling process (irrelevant)

¹Orange: <http://orange.biolab.si/>; Weka: <http://www.cs.waikato.ac.nz/ml/weka/>