

Seminar: Landnutzungsklassifikation – als Wettbewerb

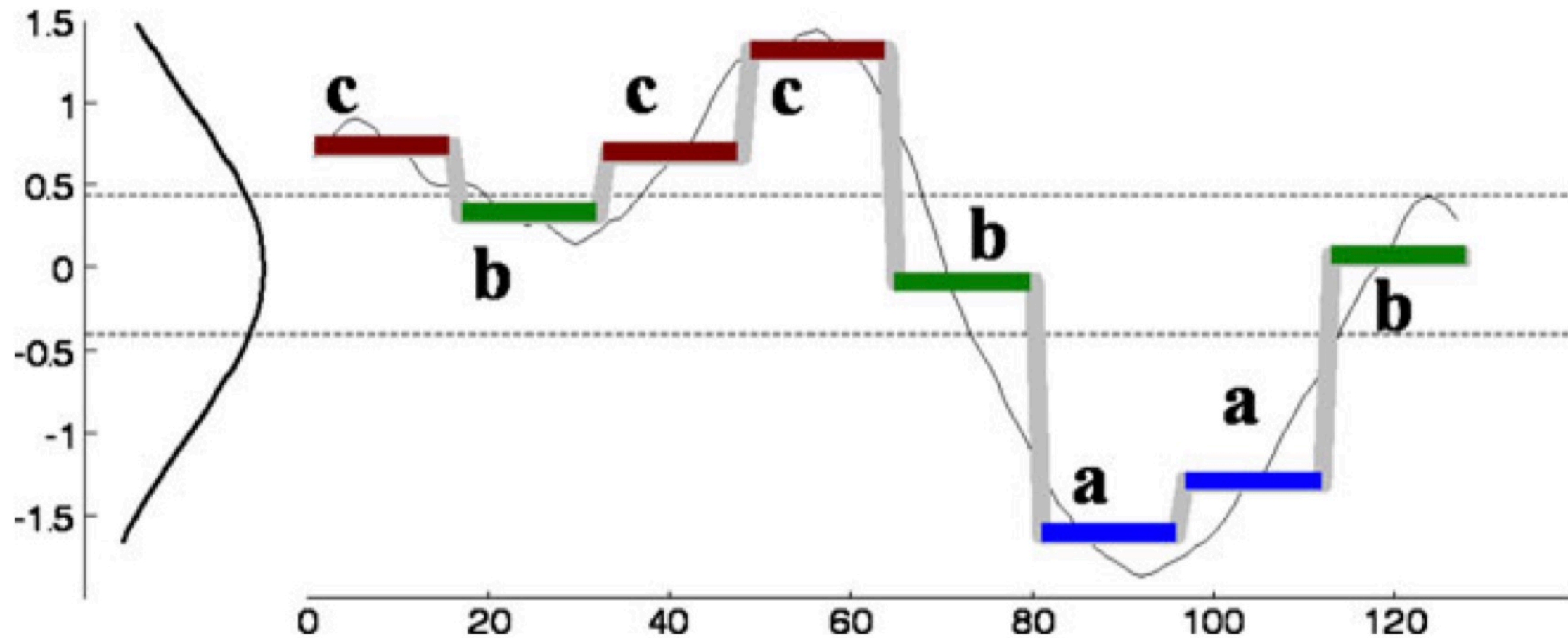
Univariate Dictionary-based Classifiers

Themenvorstellung

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Bag of Patterns



Lin, J., Khade, R., & Li, Y. (2012). Rotation-invariant similarity in time series using bag-of-patterns representation. *Journal of Intelligent Information Systems*, 39(2), 287-315.

Phases

1. Preprocessing
2. Classification
3. Evaluation

Preprocessing

- Univariate → Feature Selection → NDVI
- Missing Values
- Normalization

Classification

- Bag of Patterns
- BOSS
- WEASEL
 - ANOVA F-test
 - χ^2 -test
- SAX vs. SFA → Fourier-Transformation

Classification

- window length $w \leq N = 46$
 - $w = N, w = \frac{1}{2}N, w = \frac{1}{4}N, w = \frac{1}{8}N$
- SFA word length $l \leq N = 46$
 - $l = N, l = \frac{1}{2}N, l = \frac{1}{4}N, l = \frac{1}{8}N$
- SFA alphabet size $c \leq C = 24$
 - $c = C, c = \frac{1}{2}C, c = \frac{1}{4}C, c = \frac{1}{8}C$

Evaluation

- cross-validation
- scalability