COMPOST Dutch

The Best POS Tagger for Dutch Spoken Language

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COMPOST

~# COMmon POS Tagger

~# based on Averaged Perceptron (Collins, 2002)

~# Linux and Windows platform

~# languages: English, Czech, Slovak …and **Dutch!**

The task

~# for every word assign one tag

~# in fact, there are two steps:
- morphological analysis
  (for every word form offer all possible tags)
- disambiguation
  (chose one tag from possible tags)

Algorithm

~# data based morphological analysis (for every word all seen tags, for OOV 11 most frequent tags)

~# Averaged Perceptron (Collins, 2002)
- based on HMM
- main parameter: set of features

~# easy to (re)train

Data

~# CGN, Dutch part

~# randomly split into:
- train (5 824 127 words)
- devel test (642 448 words)
- eval test (573 873 words)

~# tuned on train and dtest

~# finally retrained on train+dtest, measured on etest

Results

~# previous best: Bosch et al., 2006: 97,1%

~# COMPOST on eval test: **97,27%**

~# over 1% error reduction
(direct comparison on same data not possible)

~# speed about 100k words per minute

~# easy-to-use application

Download

~# **http://ufal.mff.cuni.cz/compost/dutch**

~# free for academic use

~# compiled for Linux and Windows

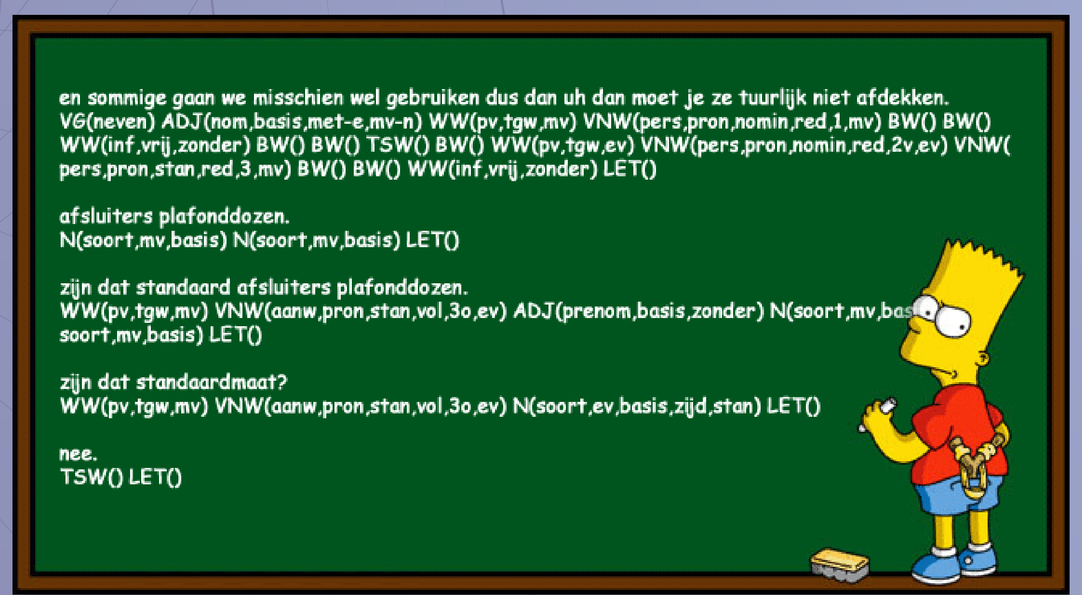
~# online version soon (no need to install anything)

References

~# van den Bosch, A., Schuurman, I., Vandeghinste, V.: *Transferring PoS-tagging and lemmatization tools from spoken to written Dutch corpus development.* LREC2006.

~# Collins, M.: *Discriminative Training Methods for Hidden Markov Models: Theory and Experiments with Perceptron Algorithms*. Proceedings of EMNLP 2002.

~# Hajič, J.: *Disambiguation of Rich Inflection*. Karolinum, Praha, 2004.



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