Natural Language Processing
SoSe 2015

HPI Hasso Plattner Institut
IT Systems Engineering | Universität Potsdam

Exercise 2: Part-of-Speech Tagging

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Genia corpus

- Genia corpus (Treebank)
  - Around 2,000 abstracts in XML format
  - Biomedical domain
  - Sentence split, tokenized, POS tagged

- Available at:
  - http://www.nactem.ac.uk/genia/genia-corpus/treebank

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Genia corpus

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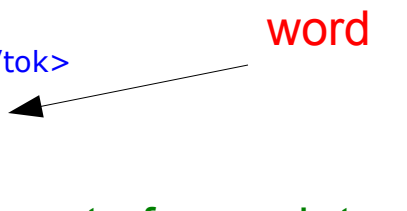
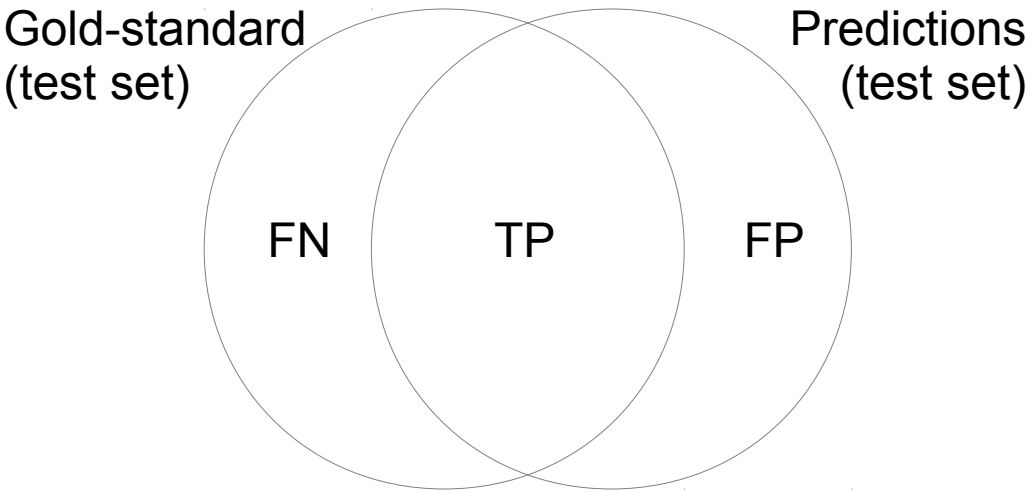


Task: Part-of-speech tagging

- Calculate precision for the test corpus
- Split in training (90%) and test (10%) sets
  - Randomly and by document
  - Learn the model using the training set (Hidden Markov Model, bigram)
  - Predict POS tags for the test set

Task: Evaluation



$$Precision = \frac{TP}{TP + FP}$$

$$Recall = \frac{TP}{TP + FN}$$

$$F - measure = \frac{2 \cdot Precision \cdot Recall}{Precision + Recall}$$

Task: Evaluation

Secretariat[NNP] is[VBZ] expected[VBN] to[TO] race[VB] tomorrow[NR] .

Secretariat[NNP] is[VBZ] expected[VBN] to[TO] race[NN] tomorrow[NR] .

5 TP, 1 FP [NN], 1 FN [VB]: Precision = 5/6

Exercise 2

- Deadline on June 8th, upload to HPI owncloud
  - README file with comments, instructions and results (precision)
  - Zipped source code

- Late submissions will lose 0.5/20 point in the exam