

* * * PGM: Final Project Presentation * * *

PoS-Tagging and NER

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Agenda

① Task Description

② Process and Tools

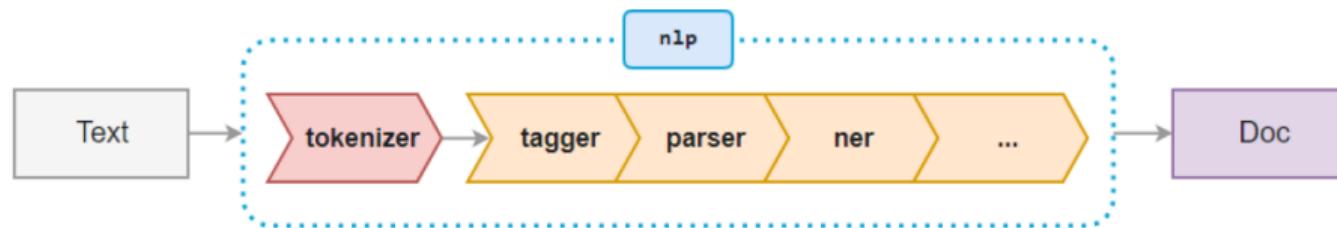
③ Results and Comparison

Task Description

- The task was to use probabilistic graphical models for:
 - PoS-Tagging (Part-of-Speech Tagging)
 - Named Entity Recognition (NER)
- We used the following models:
 - Naïve Bayes (baseline model)
 - HMMs (Hidden Markov models)
 - CRFs (Conditional Random Fields)

$$P(A|B) = \frac{P(B|A) P(A)}{P(B)}$$

Process and Tools



- tbd...

Results

POS Tagging

Naïve Bayes [POS]			
Features	F1 score	Acc word	Acc sent
w, l, s			
*			

HMM [POS]			
Features	F1 score	Acc word	Acc sent

Legend:

w: word, l: lowercase word, s: stem, p1: prefix1, p2: prefix2, p3: prefix3, s1: suffix1, s2: suffix2, s3: suffix3, c: capitalization, sh: shape, pw: previous word, nw: next word, *: all features

Results (Ctd.)

POS Tagging

CRF [POS]			
Features	F1 score	Acc word	Acc sent
*	0.985	0.985	0.719

Results (Ctd.)

Named Entity Recognition

Naïve Bayes [NER]			
Features	F1 score	Acc word	Acc sent
w, l, s			

HMM [NER]			
Features	F1 score	Acc word	Acc sent

Results (Ctd.)

Named Entity Recognition

CRF [NER]			
Features	F1 score	Acc word	Acc sent

Result Comparison

- tbd...

Thank you very much for the attention!

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Do you have any questions?