

The political discourse on discrimination

Analysing 70 years of the Bundestag



About me

Alexandra Wörner

Data scientist

Member in CorrelAid project

team

Feminist

Diversity & inclusion

Interest in politics



What? facilitate machine readability of

plenary protocols

How? techniques from computer

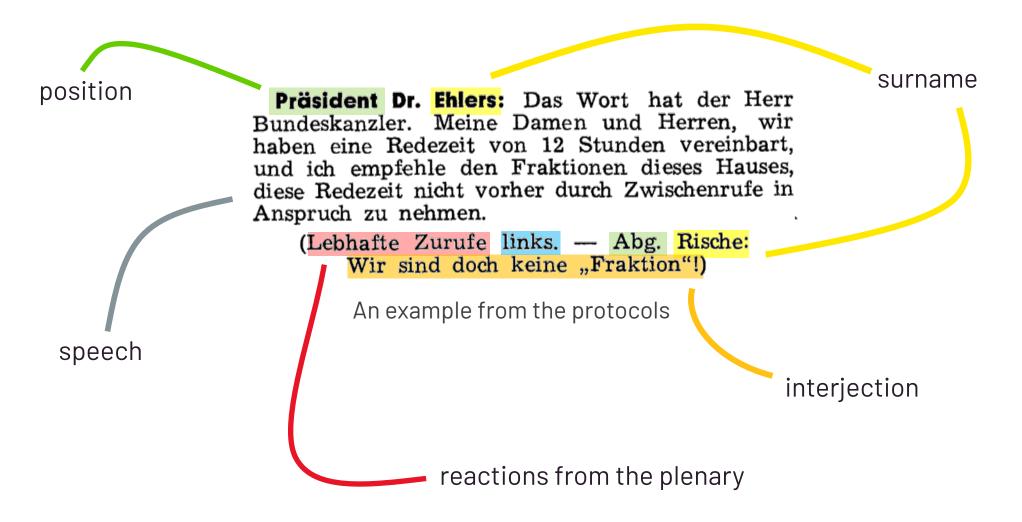
science and computer linguistics

Why? German constitution states the

publicness of the Bundestag



Elements of a speech extract





Facts & numbers

4265 protocols

4106 speakers

- ~ 900000 speeches
- ~ 2.1 Mio. interjections
- ~ 194 Mio. words



What is fed into the models?

Google trains a multitude of models every day.

Tokenization & lemmatization

```
google - train - a - multitude - of - model - every - day - .

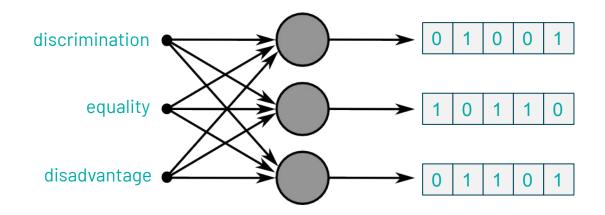
PROPN VERB DET NOUN ADP NOUN DET NOUN PUNCT
```

Model input

google - train - multitude - model - day



Semantic Analysis: Word2Vec



Two approaches

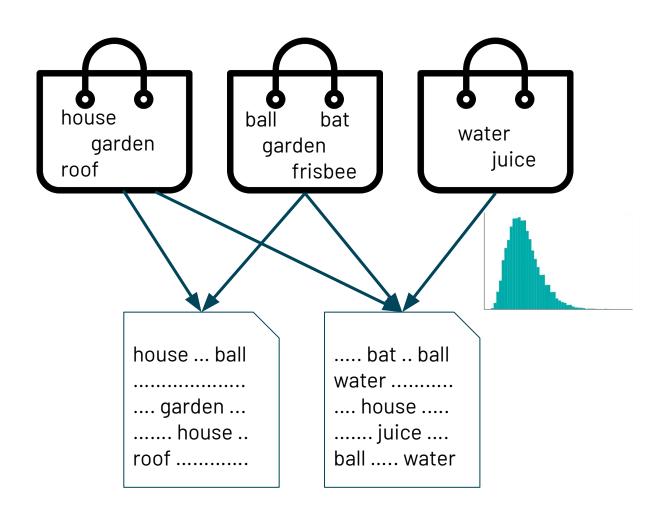
- Continuous bag of words
- Skipgrams







Semantic Analysis: Latent Dirichlet Allocation



	topic 1	topic 2	topic 3
house	0.8	0.1	0.1
garden	0.65	0.35	0
roof	0.95	0.02	0.03
ball	0.2	0.75	0.05
bat	0.15	0.82	0.03
frisbee	0.11	0.88	0.01
water	0.3	0	0.7
juice	0.06	0.04	0.9