



# Historical Memes For German Teens

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# IDEA/CONCEPT

- Apply Natural Language Processing to the dataset (NLP)
- Select words to apply to the “Is this a pigeon meme” that create pro-socialist propaganda.
- Use these memes to connect historical socialist struggle to current methods of youth political engagement.
- Result: Meme-generator using phrases chosen by NLP from the “Sozialismus und Liberalismus” dataset.

“Is this a pigeon”



# Memes and politics

- Political memes coopt the established format of a meme in order to communicate a political message.
- Reach apolitical audiences.
- Normalize radical ideas by embedding them in humorous context that makes it easy to disavow them (“it was just a joke”).
- Produced and disseminated at virtually no cost.

**SPD**



**PRIVATISATION**

**IS THIS SOCIAL DEMOCRACY?**

**HACKATHONISTAS**



**LOOKING  
AT MEMES**

**IS THIS ACTIVISM?**

# NLP: Topic Modelling

- WIKI: Statistical model for discovering the abstract "topics" that occur in a collection of documents. The "topics" produced by topic modeling techniques are clusters of similar words.
- Based on distribution of words in documents (Latent semantic indexing - LSI)
- Popular in Digital Humanities, e.g. Computational History
- But requires a lot of data cleaning and fine tuning



# NLP: Named Entity Recognition

- Named entity recognition (NER):
  - Used SpaCy's German language model to recognise entities.
    - (based on machine learning and neural networks)
  - Entities are words or phrases of type: "Person", "Location", "Organisation", or "Miscellaneous"

# Combining Topic Modelling and Named Entity Recognition

- We matched the topic words to the entities via substring match
  - eg: “Wohnung” matched with “Wohnungsfrage”, “Wohnungsnot”, etc.
  - We added all entities that contain the topic words to a long list that included the entity itself and it’s entity label (“Person”, “Location”, etc.)
  - This allowed the topic words to be used to select more complex entities to create more interesting text.

# Data Limitations

- SpaCy German model is trained on modern newspapers
- Texts are often in old script, making computer vision inaccurate (“Klasse” => “Klaffe”)
- Unable to classify text as “pro” or “anti” socialist with the time we had so we could not achieve our goal of making explicitly pro-socialist propaganda.

# Putting everything together: Meme-Generator

- The meme-generator randomly picks a topic.
- Within the topic, it randomly picks
  - a person or organisation for the “boy”-text
  - 2 more entities for the other 2 texts
- Generates the image with the chosen texts.



**Ira Steward**



**Riesen  
Volksversammlungen**

**Ist das international socialen Bewegung?**

**kapitalistischen  
bürgerlichen  
Gesellschaft**



**Aschaffener  
Zeitung**

**Ist das Organisation der  
gewerkschaftlichkämpfenden Landlungsgehilfen Berlins?**

**socialen  
Frage II**



**demAchtstundentag**

**Ist das socialen Geschichte?**

**Berliner  
Beamtenwohnungsvereins**



**Kellerwohnungen**

**Ist das Kleinwohnungegegen?**

**erklärten Das  
Adgcordnktenhaus**



**Reichstagswahlkreis  
Niederbarnim**

**Ist das wahlberechtigten?**

**Widersprüche der  
kapitalistischen Welt**



**Das Gesetz  
der kapitalistischen  
Akkumulation 38**

**Ist das augenfälligsten Gesetz  
des kapitalistischen Tauschverkehrs?**

**Delegiertenwahl  
für die Ortskrankenkasse  
der Apotheker**



**Königs-Wusterhausen**

**Ist das Gesetzes der  
kapitalistischen Akkumulation?**

# Moving Forward

- If we would take this project further, our team would like to:
  - Create memes that relate the current socialist movement to historical struggle for socialism.
  - Make a Twitter bot that automatically posts these memes.
- Technical improvements to achieve this:
  - Manual cleaning of text data
  - Fine tune NER: train entity recognizer by human annotators
  - Fine tune TM: optimize lengths of documents and number of topics to improve topic coherence
  - Split corpus into 2 or 3 political camps

