# Populism Detection ÖAW AI Winter School 2023

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How would you define populism?



# Populism ideational definition

"An ideology that considers society to be ultimately separated into two homogeneous and antagonistic groups, 'the pure people' versus 'the corrupt elite', and which argues that politics should be an expression of the volonté générale (general will) of the people."

Cas Mudde 2004 – The Populist Zeitgeist [11]



#### Populism detection

- Most work done in social sciences
- Manual coding or dictionary based methods
- Datasets available for party manifestos, political speeches or for the classification of political parties or actors

  Social Sciences

  Data Science
- Special case: grassroot populism lack of (especially german) data



#### Literature: Definitions

- Political strategic: "mass movement lead by an outsider [...] to gain or maintain power by using anti-establishment appeals and plebiscitarian linkages" [1]
- Communication style: stylistic elements incorporated in political messages, for example include colloquial and emotional language, toxicity/incivility, simplification etc. [2]
- Essex School: populism is not an ideology or a set of fixed beliefs, but rather a way to construct political identities that form a sense of belonging among a certain group of people [10]
- Ideational definition: populism as a thin centered ideology [11]



# Literature: Manual Coding and Dictionary Based Methods

- Studies of political party manifestos or speeches [9]
- Comparison of manual content analysis and a dictionary based method [12]
  - dictionary relies on certain words to be present
  - manual coding involves extensively trained coders
  - dictionary drastically reduces resource costs, with a loss in validity
- German dictionary to measure populist social media content [7]



# Literature: Supervised Machine Learning Approaches

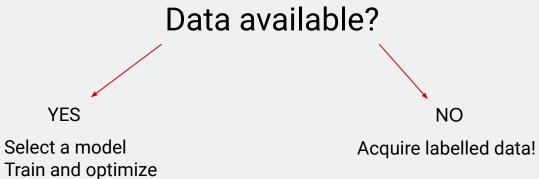
- First attempt (2016) using basic machine learning models and comparing them to human coding [8]
- Results of machine learning not satisfactory, but with high potential
- Other attempts using more advanced algorithms could highly improve performance for the task [5] [13] [14]
- But: they also all deal with political texts
- Study about populist Reddit comments that focuses on an "Us vs. Them" mentality [3]



#### NLP Application: Classification

Evaluate

- Distinct set of classes
- Labelled training/test data





### Challenges

- Obtaining labelled data is resource intensive
- Finding an operable definition
- Develop concise annotation guidelines
- Ideas can be very explicit
- Measure quality of given labels
- General problems with user generated content
  - Short texts
  - Irony
  - Language/Dialect
  - Context
  - ...



### Create a sample for annotation

- Populism is a rare phenomenon -> data is unbalanced
- Keyword search or use of a dictionary to determine candidates
- Dictionaries rely on certain words to be present
- Reduce bias by random sampling



### Populism ideational definition

"An ideology that considers society to be ultimately separated into two homogeneous and antagonistic groups, 'the pure people' versus 'the corrupt elite', and which argues that politics should be an expression of the volonté générale (general will) of the people."

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### Populism definition: Motives

#### Anti-Elitism: [6]

- Discrediting the elite
- Blaming the elite
- Detaching the elite from the people

Leider hat die Elite die Umverteilung von unten nach oben forciert, wodurch wir heute in diese präkeren Arbeitsverhältnisse getrieben wurden. Die Politiker könnten dies sofort wieder ändern.

Warum sie das nicht tun? Weil Sie die Befehle und Wünsche dieser Eliten ausführen und nicht mehr dem Volk dienen. Es ist Zeit für einen Systemwechsel!

Unfortunately, the elite have forced the redistribution from the bottom to the top, which has driven us into these precarious working conditions today. Politicians could change this immediately.

Why don't they do so? Because they carry out the orders and wishes of these elites and no longer serve the people.

It is time for a system change!



#### Populism definition: Motives

People-Centrism: [6]

- Approaching the people
- Praising the people's virtues
- Praising the people's achievements
- Describing people as homogenous

Das Volk will nicht impfen, das Volk will lieber Maske tragen und testen!

Da kann die Regierung am Kopf stehen und mit den Beinen Fliegen fangen, das Volk macht, was das Volk will!

Und wählt Mit freundlichen Grüßen ...

The people do not want to vaccinate, the people prefer to wear mask and test!

The government can do whatever it wants, the people do what the people want!

And votes Sincerely ...



#### Populism definition: Motives

People-Sovereignty: [6]

- Demanding popular sovereignty
- Denying elite sovereignty

Wenn auch unwahrscheinlich, so hoffe ich doch, dass meine Zeilen den Weg zu Euch, meine geschätzten VOLKsvertreter finden. Wenn auch unwahrscheinlich, so biete ich Euch ein persönliches Treffen an, indem Ihr eine Stimme aus genau diesem VOLK, welches Eure "Hausverstand-Ergüsse" finanziert, hören könnt. Denn es ist uns allen bewusst, dass die leisen Stimmen Eures Volkes nur im Wahljahr zu hören sind. Wenn auch dieses persönliche Treffen höchst unwahrscheinlich ist, so ließe ich mich gerne belehren, warum EUER Hausverstand besser ist als Unserer;

Even though unlikely, I hope that my lines will find their way to you, my esteemed PEOPLE representatives. Even if improbable, I offer you a personal meeting, in which you can hear a voice from exactly this PEOPLE, which finances your "common sense outbursts". For we are all aware that the quiet voices of your people can only be heard in election year. Even if this personal meeting is highly unlikely, I would be happy to be taught why YOUR common sense is better than OURS;



#### Evaluate manual labelling

- Measure inter-annotator-agreement (e.g. Krippendorff's alpha)
- Decide on an agreement strategy (e.g. majority vote)
- Establish gold labels
- Evaluate existing baseline methods and check performance (accuracy, precision, recall, F1)



### How can we profit from machine learning?

- Use the labelled data as training, validation or test data (depending on the amount of labelled data)
- Lack of data? Test strategies to gain new training data (e.g. data augmentation, use dictionary based methods) and use the gold labels for evaluation
- Use a existing dictionary by Johannes Gründl built for populist social media content to gather more training examples and evaluate on human coded data
- State of the art machine learning algorithms can model context
- Use existing resources to improve performance
- Use the model to quantify large amounts of documents and get insights into discussions and discourse



#### Transformer models

- BERT (Bidirectional Encoder Representation from Transformers) [4]
- Powerful pre-trained models freely available (<a href="https://huggingface.co">https://huggingface.co</a>)
- Select suitable model (based on task, language, etc.)
- Fine tune on your specific task
- Evaluate on gold labels

More on that in the exercise part!



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