Awareness Level and Popularity of Presidents: A Location-Based Twitter Sentiment Analysis of Donald Trump and Boris Johnson

Urban Analytics
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Agenda

1	Topic
2	Questions and Challenges
3	Roadmap (Next Steps)
4	Utilization of AI

I intend to choose a sentiment analysis of two polarizing head of states as a topic.

	Unveiling Urban Perspectives: A Sentiment Analysis of the U.S. Capitol Storming Across Global Cities	Comparative Study of Urban Discourse: A Cross-City Topic Modeling Analysis	Awareness Level and Popularity of Presidents: A Location-Based Sentiment Analysis of Donald Trump and Boris Johnson
Description	Analyze the Twitter sentiment to gauge public reactions and emotions surrounding the storming of the U.S. Capitol. By analyzing tweets, the research aims to uncover regional variations in sentiment, explore public discourse, and understand the impact of this significant event on diverse urban populations.	Analyze the content of tweets from London, Birmingham, Los Angeles, Melbourne, and New York City to compare and contrast the dominant topics of discussion. Examine how major events and global trends are reflected in the Twitter discourse of each city, highlighting similarities and differences.	Assess the awareness level and popularity of Presidents Trump and Prime Minister Johnson in their home countries by conducting a location-based Twitter sentiment analysis. The research aims to provide insights into regional variations in public perception and sentiment towards these political figures over the period from 2017 to July 2022.
Result	Some have already researched in that direction limiting novel insights. Similarly with other considered research topics, such as Brexit or sport events.	Bias that local events are more important → But the aim is to find out the bias. Can you please reiterate the issue here?	Chosen topic (for the time being)

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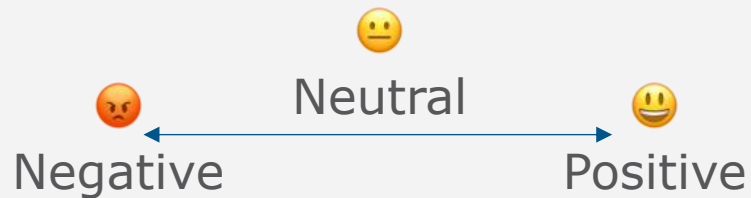# What to analyze and how could results look like

1. Awareness level of presidents (#Tweets about each president)

2. Popularity of presidents (average sentiment and outliners (only strong negative & positive vs neutral))

3. Relationship of popularity with location (popularity as before, just broken down to city and country)

The awareness level and popularity of the head of states and the location's impact on them is going to be analyzed.

Focus of Analysis	Awareness Level of Presidents	Popularity of Presidents	Relationship between Popularity and Awareness Level With Location
Data Foundation and Result	Number of tweets about each head of state (bar chart)	Sentiment distribution of the head of states (distribution graphs), e.g., only strong negative and positive vs mostly neutral	Sentiment distribution of the head of states (distribution graphs) as before, just broken down to city and country

Sentiment Analysis has three sub-fields and the seminar thesis is going to build on Sentiment Scoring.

Sentiment Scoring/Graded Sentiment Analysis (level of positivity)

😐

Neutral

😡   😃

Negative   Positive

Emotion Detection (happiness, frustration, anger, and sadness with ML or lexicons)

Aspect-based Sentiment Analysis (ABSA; e.g., "product is too small" deals with the size aspect of the product)

Questions and Challenges

Question or Challenge	(Possible action to find a) solution
Identify which topics have been covered in other papers to verify that the seminar thesis can provide novel insights.	A broad research in google scholar for a quick overview.
How do you efficiently handle edge cases which talk about both heads of state?	Probably too few that it makes a difference.
How to filter out relevant tweets? Use tags, filter by word, topic modeling?	Use publications, internet resources and ChatGPT to identify the best approach.
Is it relevant to mention how transferable my approach (steps, code) is for other topics?	I suppose yes, but I want to check with you ☺
How can you handle general sentiment analysis challenges (subjectivity, context, irony, comparisons, emojis, idioms, double negation)?	I have researched a bit and have gotten an overview, but I still need to verify that with other sources.
What are your expectations for a literature research? Is the objective to find out, if academics have published about the selected topic and/or methodology in sentiment analysis?	I suppose both with a corresponding research string for Scopus in the Basket of 8 (or more?) with a research methodology, such as vom Brocke 2015.

Roadmap and Next Steps

DEC: RESEARCH
- Define Scopus Research String
- Perform Literature Research

DEC/JAN: IMPLEMENTATION
- Research Methodology of Sentiment Analysis
- Implement Sentiment Analysis

JAN: SKI WEEK
- Prepare presentation

FEB: SUBMISSION SEMINAR THESIS
- Finalize Seminar Thesis
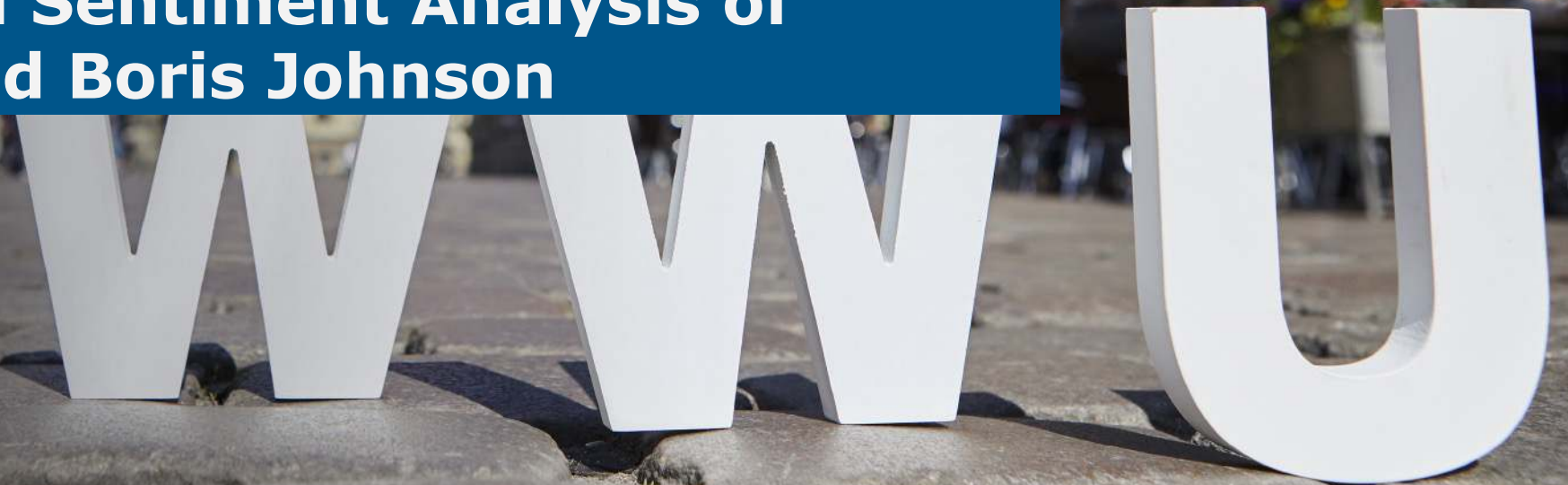- Prepare final presentation and roundtable discussion

Utilization of AI

Roles

- Realization & implementation with ML:
  - Sentiment analysis: Deep Learning
  - Code generation: ChatGPT (simple and few lines of code)
- ChatGPT as a supportive artifact
  - Brainstorming/divergent thinking/inspiration: think of a seminar thesis topic
  - Revisor: check your research approach, ML steps and procedure
  - Language support: helpful ways to rewrite low quality sentences
  - Research assistant: Can it be used to give you a general understanding of the theoretical background?

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Backlog

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Emotion Detection

https://onlinelibrary.wiley.com/doi/full/10.1002/eng2.12189