

HOW SOCIAL MEDIA AFFECT POLITICAL POLARIZATION?

COMPREHENSIVE LITERATURE REVIEW

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Formulating the problem

In the past decades, Social media played a critical role in political polarization observed in the societies of the world.

This Research Overview focused on the general situation in different areas of the world starting from 2010.

How social media platforms such as Facebook and Twitter have contributed to the increasing political polarization observed in the societies of the world, as well as the underlying mechanisms driving this effect from 2010?



Research Gaps

- 1) Cross and multi-platform research.
- 2) The generalizability and comparability of U.S. findings.
- 3) Longitudinal studies.

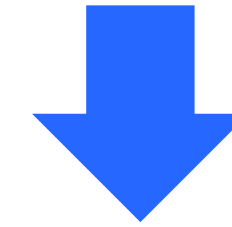


Why It Matters: The Importance and Relevance of Our Topic

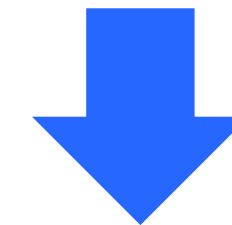
1. Growing Social Media -> its impact on society and politics
2. A concerning issue in many countries -> Important reason: Social Media
3. The topic of social media's impact on political polarization has significant implications -> for democracy, civic engagement, and social cohesion
4. Understanding the relationship between social media and political polarization -> helping to identify potential solutions and strategies -> for healthier political discourse, mitigating the negative effects of polarization

Scope of the Review

- Literature Review of 15 Articles from different years.



- Comparing how useful those methods are in terms of complexity, flexibility, and feasibility.
 - Data Collection Methods
 - Data Analyze Methods



- Reflection on how the project results connect with the theories and the content we have seen during the course.
 - Useful ones for our work



Some takeaways from articles

Right-wing Twitter users

Elections

Journalists

Serial Activists

Echo Chambers vs. Cross-Cutting
Interactions



How do They Approach to Data Collection?

- Twitter Data From U.S. House of Representatives (Democrats, Republics)
- Twitter Data From Election Periods
- Twitter Data From Specific Keywords
- Facebook Data From Public Posts
- WhatsApp Data From Specific Groups



All of them mostly use twitter data by using API.

Comparing Complexity of Articles

The order of methods from least to most complex would be:

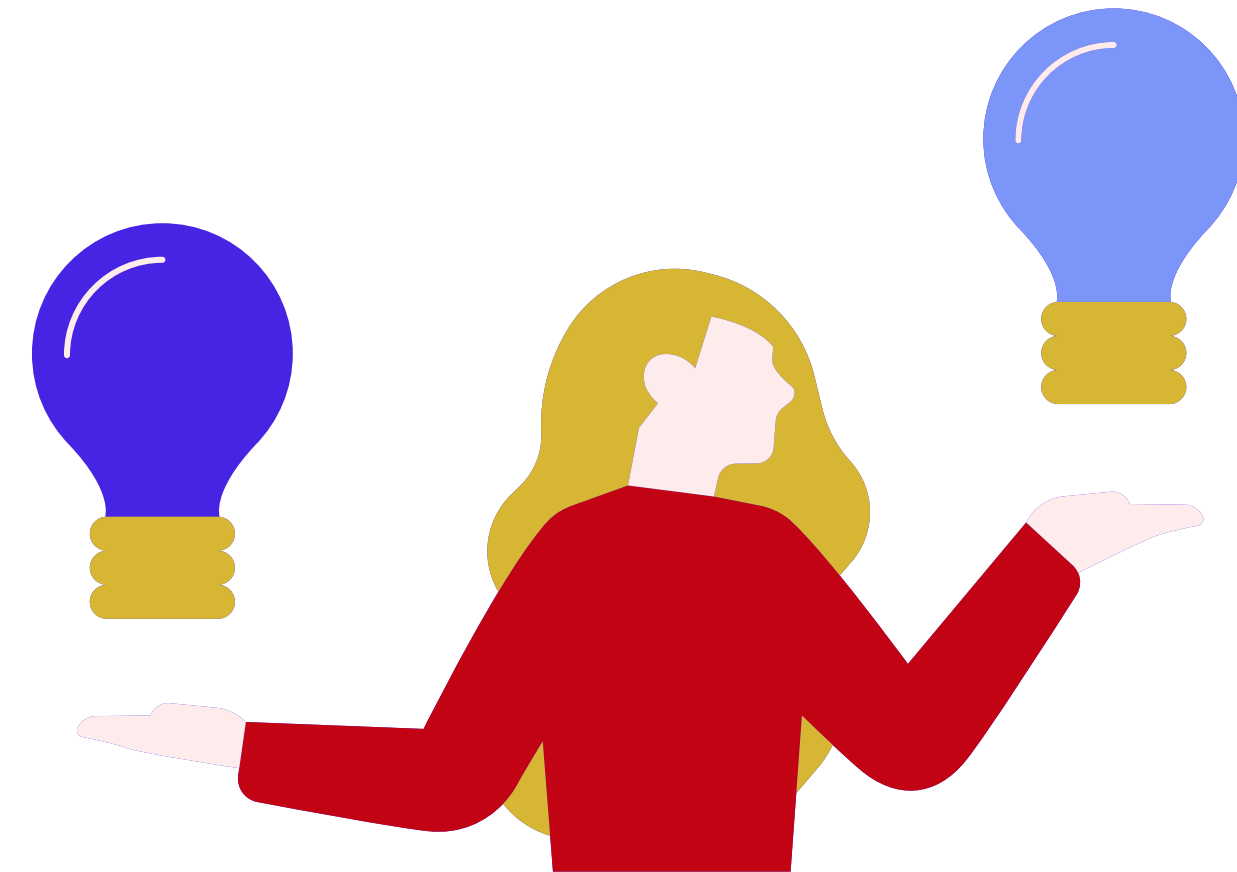
- 1- Twitter Data From Specific Keywords
- 2- Twitter Data From Election Periods
- 3- Twitter Data From U.S. House of Representatives (Democrats, Republicans)
- 4- Facebook Data From Public Posts
- 5- WhatsApp Data From Specific Groups



Comparing Flexibility of Articles

The order of methods from least to most flexible would be:

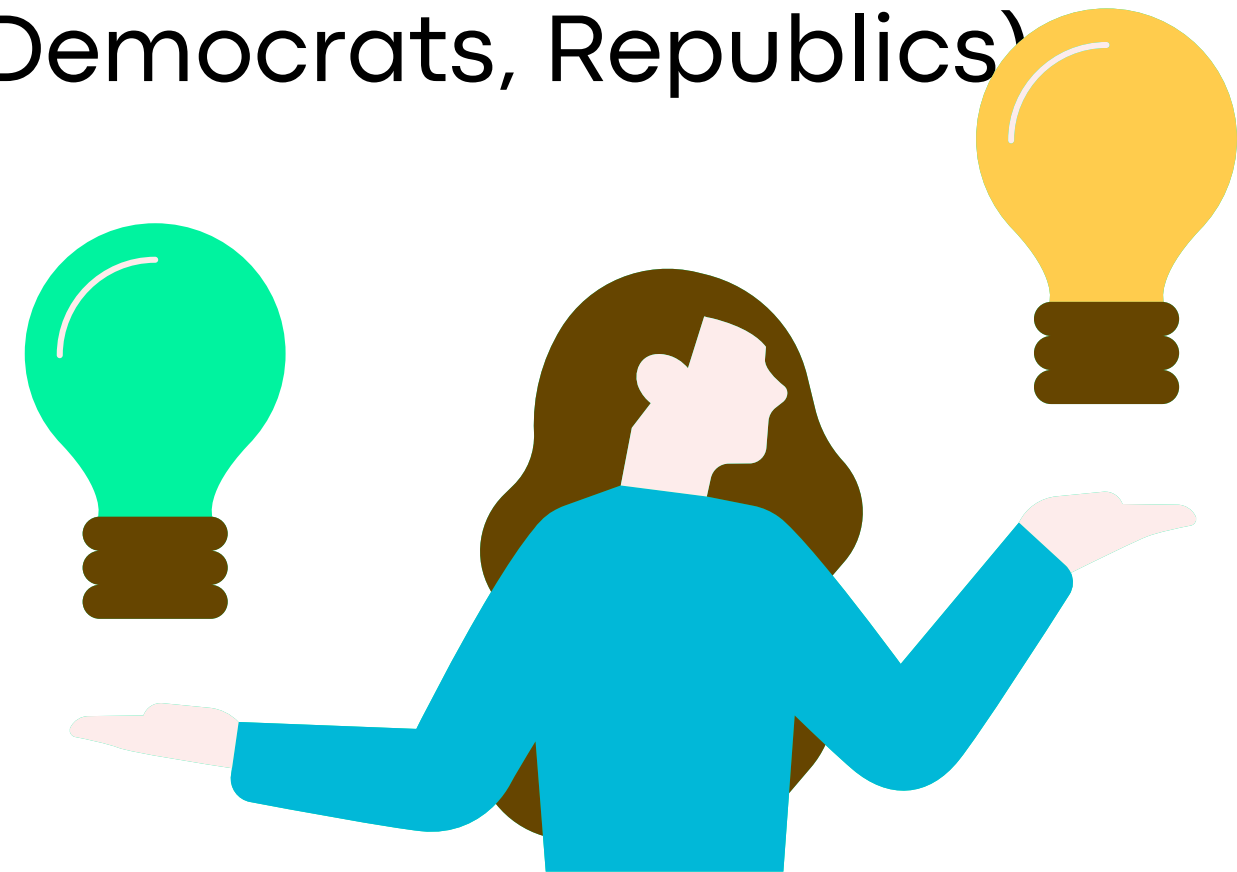
- 1- WhatsApp Data From Specific Groups
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- 4- Twitter Data From Election Periods
- 5- Twitter Data From Specific Keywords



Comparing Feasibility of Articles

The order of methods from least to most feasible would be:

- 1- WhatsApp Data From Specific Groups
- 2- Facebook Data From Public Posts
- 3- Twitter Data From Election Periods
- 4- Twitter Data From U.S. House of Representatives (Democrats, Republics)
- 5- Twitter Data From Specific Keywords



Computational Methods in Data Analysis

Social Network Analysis

More than half (9 out of 15)

Sentiment analysis

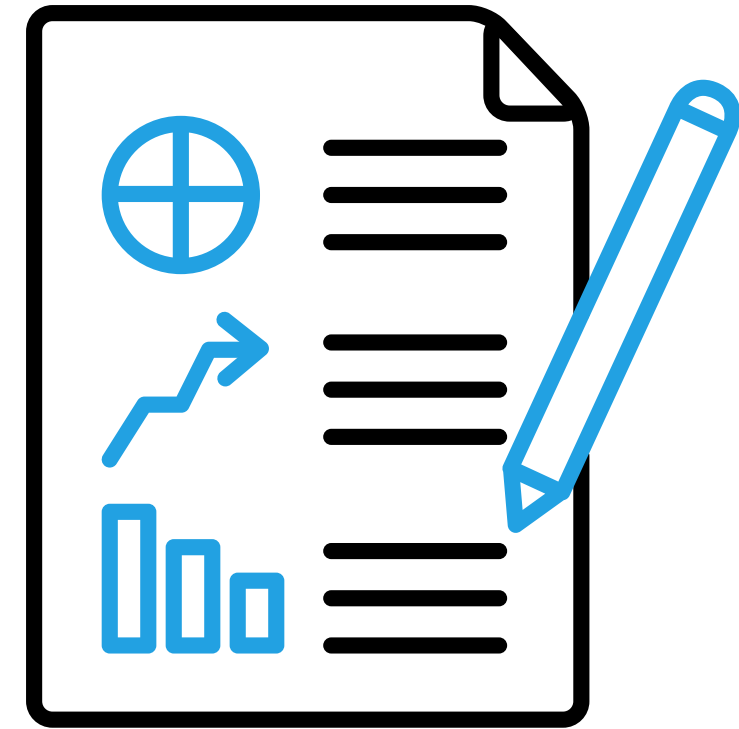
Using combination with network analysis (5 out of 15)

Statistical Methods

Topic Extraction using Latent Dirichlet Allocation (LDA) and measuring politicians' ideological positions using DW nominate scores. (2 out 15)

ML Algorithms

Machine learning was used to find out whether the contexts of tweets contain Polarization or desired topics (such as Random Forest, Classification algorithms, Neural Networks). (3 out of 15)

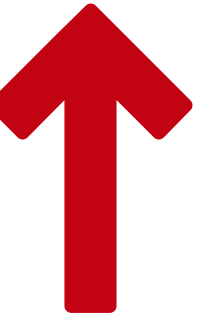


Complexity

"Learning Political Polarization on Social Media Using Neural Networks"



Developed Own Algorithm



"Political Polarization in Social Media: Analysis of the 'Twitter Political Field' in Japan"



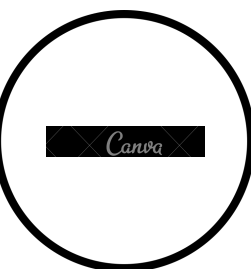
**Topic Modelling LDA /
Sentiment Analysis /
SNA**



"Political polarization on twitter: Implications for the use of social media in digital governments"



**Regression Analysis /
DW-Nominate Score/
Descriptive Statistics**

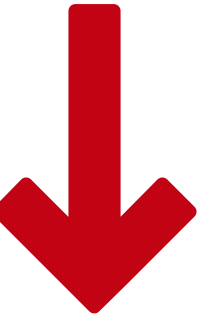


Flexibility

"Analyzing Political Polarization on Social Media by Deleting Bot Spamming"



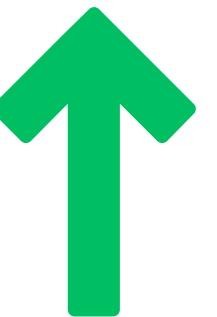
**Developed Own
Algorithm**



"Exposure to opposing views on social media can increase political polarization"



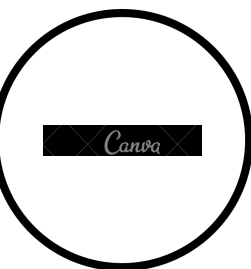
**Social Network
Analysis**



"Analyzing Polarization of Social Media Users and News Sites during Political Campaigns"



**Sentiment
Analysis**

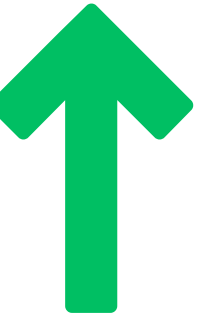


Feasibility

"Investigating Political Polarization on Twitter: A Canadian Perspective"



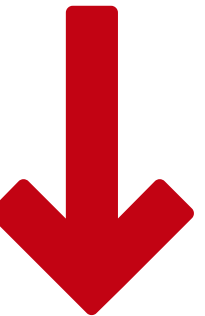
Netlytic



"Learning Political Polarization on Social Media Using Neural Networks"



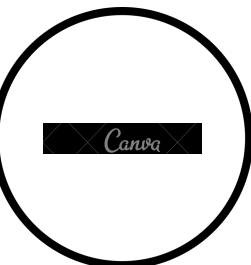
**Developed Own
Algorithm**



"Serial activists: Political Twitter beyond influentials and the twittertariat"



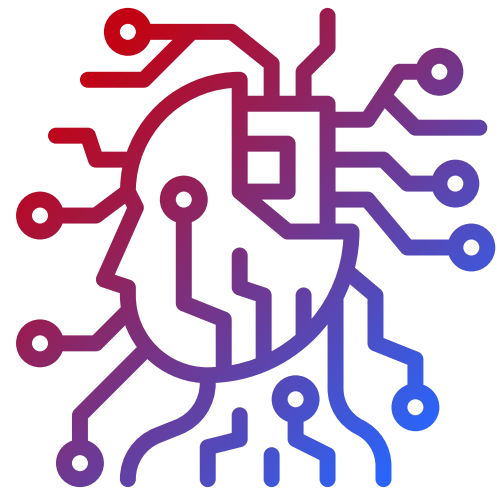
**Social Network
Analysis**



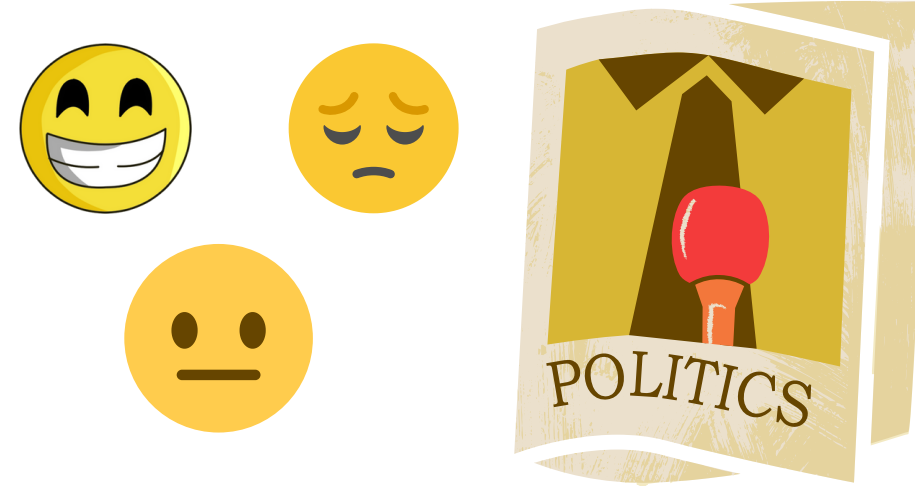
What of these computational **methods** can be **useful for our work?**



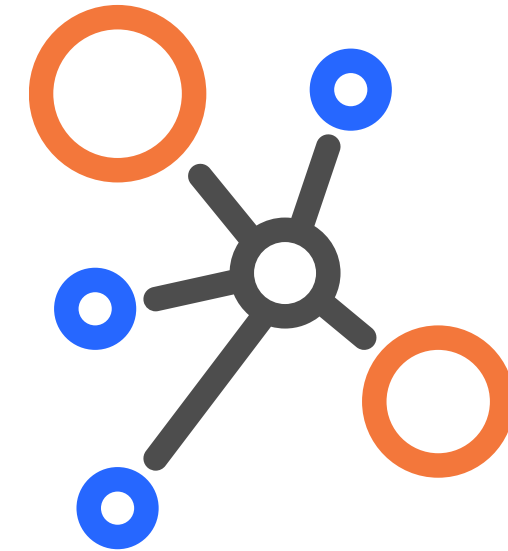
ML Algorithms



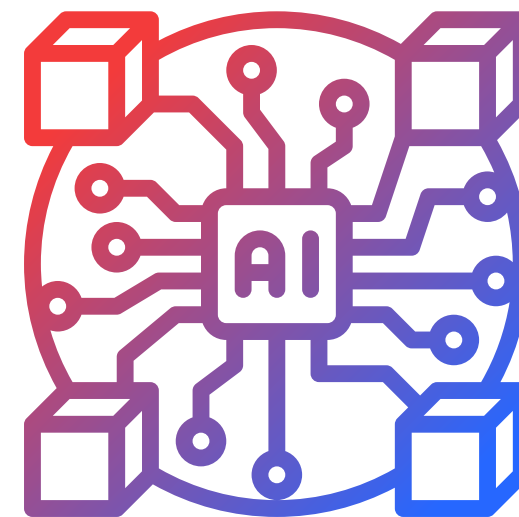
Sentiment Analysis



Social Network Analysis



Developing our Algorithm



**THANK
YOU**