Machine Learning Approaches for Classifying the Peace-War Orientations of Global News Organizations' Social Media Posts

Information Systems and Management Science(ISMS 2021)

- Ada Peter,

- Rose Omole,

- Sanjay Misra,

- Lalit Garg &

- Jonathan Oluranti

Abstract

The study used the existing conceptualizations of peace and war journalism to create supervised machine learning text classifiers trained and tested to identify the war or peace orientations of news stories posted on social media. Peace-oriented journalists promote peace initiatives, ignore differences, and promote conflict resolution. In contrast, war-oriented journalists promote differences between opposing parties and instigate violence as means to resolving conflicts. Using Naïve Bayes, Logistic Regression, Decision Trees, Random Forests, and Support Vector Machines (SVM), the study trained and tested five computational models to detect the peace or war orientations of the news posted on social media. The results indicate that Random Forest has the highest predictive accuracy for predicting war or peace orientations of online news stories. Naïve Bayes ranked the least accurate algorithm for predicting peace or war orientations of online news stories.

The trained algorithms are available on Streamlit: https://share.streamlit.io/ade-rose/peace-and-war-journalism-classifier/app.py.

This is a preview of subscription content, log in via an institution to check access.

.

References

1. Galtung, J.: Violence, peace, and peace research. J. Peace Res. **6**(3), 167–191 (1969). https://doi.org/10.1177/002234336900600301

   Article Google Scholar

2. Galtung, J.: Peace journalism and reporting on the United States. The Brown J. World Aff. **22**(1), 321–333 (2015). http://www.jstor.org/stable/24591019

   Google Scholar

3. Abdulbaqi, S., Ariemu, O.: Newspapers framing of herdsmen-farmers' conflicts in Nigeria and its implication on peace-oriented journalism. Theatre Media Stud. **11**(2), 77–105 (2017)

   Google Scholar

4. Fahmy, S., Neumann, R.: Shooting war or peace photographs? An examination of newswires' coverage of the Conflict in Gaza (2008–2009). Am. Behav. Sci. **56**(2), NP1–NP26 (2012). https://doi.org/10.1177/0002764211419355

   Article **Google Scholar**

5. Lee, S.T., Maslog, C.C., Kim, H.: Asian conflicts and the iraq war: a comparative framing analysis. Int. Commun. Gaz. **68**(5–6), 499–518 (2006). https://doi.org/10.1177/1748048506068727

   Article **Google Scholar**

6. Zaheer, L.: War or peace journalism: comparative analysis of Pakistan's English and Urdu media coverage of Kashmir conflict. South Asian Stud. **31**, 713–722 (2016)

   Google Scholar

7. De Michelis, S.: Peace Journalism in Theory and Practice. E-Int. Relat. (2018)

   Google Scholar

8. Hussain, S.: Media coverage of Taliban: is peace journalism the solution? Asia Pac. Media Educ. **26**(1), 31–46 (2016). https://doi.org/10.1177/1326365X16640340

   Article **Google Scholar**

9. Lynch, J.: What's so great about Peace Journalism? Glob. Media J. – Mediterr. Ed. **1**(1), 74–87 (2006)

   Google Scholar

10. Mashoed, B.: Peace Journalism: A Practical Handbook for Journalists in Cyprus. In: Vakfı, N.T. (ed.), (2017)

    Google Scholar

11.   McGoldrick, A., Lynch, J.: Peace Journalism: What is it and how to do it? Reporting the World (2006)

Google Scholar

12.   McGoldrick, A., Lynch, J.: Audience responses to peace journalism. Journalism Stud. **17**(5), 628–646 (2016). https://doi.org/10.1080/1461670X.2014.992621

Article **Google Scholar**

13.   Peleg, S.: Peace journalism through the lens of conflict theory: analysis and practice. Conflcit Commun. Online **5**(2), 18 (2006)

Google Scholar

14.   Powers, S., O'Loughlin, B.: The Syrian data glut: rethinking the role of information in conflict. Media, War Conflict **8**(2), 172–180 (2015). https://doi.org/10.1177/1750635215584286

Article **Google Scholar**

15.   Shinar, D.: Can peace journalism make progress? The coverage of the 2006 Lebanon War in Canadian and israeli media. Int. Commun. Gazette **71**(6), 451–471 (2009). https://doi.org/10.1177/1748048509339786

Article **Google Scholar**

16.   Flaounas, I., et al.: The structure of the EU mediasphere. PLoS ONE **5**(12), e14243 (2010). https://doi.org/10.1371/journal.pone.0014243

Article **Google Scholar**

17.   King, G.: Social Science One - Our Facebook Partnership. Harvard's Institute for Quantitative Social Science (2018)

Google Scholar

18.   Galtung, J.: On the role of the media in worldwide security and peace. In: Varis, T. (ed.) Peace and Communication, pp. 249–266. Universidad para La Paz, San Jose, Costa Rica (1986)

Google Scholar

19.   Galtung, J.: Conflict Transformation by Peaceful Means: The TRANSCEND Method (2000)

Google Scholar

20.   Srinivasan, R., Chander, A.: Biases in AI systems: a survey for practitioners. Queue **19**(2), 45–64 (2021). https://doi.org/10.1145/3466132.3466134

Article **Google Scholar**

21.   Hariri, R.H., Fredericks, E.M., Bowers, K.M.: Uncertainty in big data analytics: survey, opportunities, and challenges. J. Big Data **6**(1), 44 (2019). https://doi.org/10.1186/s40537-019-0206-3

Article **Google Scholar**

22.   Goh, Y.C., Cai, X.Q., Theseira, W., Ko, G., Khor, K.A.: Evaluating human versus machine learning performance in classifying research abstracts. Scientometrics **125**(2), 1197–1212 (2020). https://doi.org/10.1007/s11192-020-03614-2

Article **Google Scholar**

Download references

Author information

Authors and Affiliations

1. **Covenant University, Ota, Ogun State, Nigeria**
   Ada Peter, Rose Omole, Sanjay Misra, Sanjay Misra & Jonathan Oluranti
2. **Department of Computer Science and Communication, Ostfold University College, Halden, Norway**
   Lalit Garg
3. **University of Malta, Msida, Malta**
   Lalit Garg

Corresponding author

Correspondence to Sanjay Misra .

Editor information

Editors and Affiliations

1. **Department of Computer Information Systems, University of Malta, Msida, Malta**
   Lalit Garg
2. **Computer Science and Engineering, National Institute of Technology, Chhatisgarh, India**
   Dilip Singh Sisodia
3. **Central University of Rajasthan, Ajmer, Rajasthan, India**
   Nishtha Kesswani
4. **Computer Information Systems Department, University of Malta, Msida, Malta**
   Joseph G Vella
5. **EMLYON Business School, Écully, France**
   Imene Brigui
6. **Faculty of Information and Communication Technology, University of Malta, Msida, Malta**
   Peter Xuereb
7. **Department of Computer Science and Communication, Ostfold University, Halden, Norway**
   Sanjay Misra
8. **Computer Science and Engineering, National Institute of Technology, Chhattisgarh, India**
   Deepak Singh

Appendix

Appendix

What does a Peace Journalist do? This is the Original table by Prof Johan Galtung.Footnote6
The current study was based only on the first theme: Peace and war-oriented journalist.

Peace/conflict journalism	War/violence journalism
I. Peace/conflict-orientated	I. War/violence orientated

Peace/conflict journalism	War/violence journalism
Explore conflict formation, x parties, y goals, z issues general "win, win" orientation	Focus on conflict arena, two parties, one goal (win), war general zero-sum orientation
Open space, open time; causes and outcomes anywhere, also in history/culture	Closed space, closed time; causes and exits in the arena, who threw the first stone
Making conflicts transparent	Making wars opaque/secret
Giving voice to all parties; empathy, understanding See conflict/war as the problem, focus on conflict creativity	"us-them" journalism, propaganda, voice, for "us."
Humanisation of all sides; more so the worse the weapons	See "them" as the problem, focus on who prevails in war, Dehumanizationionn of "them"; more so the worse the weapon
Proactive: prevention before any violence/war occurs	Reactive: waiting for violence before reporting
Focus on invisible effects of violence (trauma and glory, damage to structure/culture)	Focus on the visible effect of violence (killed, wounded, and material damage)
II. Truth-orientated	II. Propaganda-orientated
Expose untruths on all sides / uncover all cover-ups	Expose "their" untruths / help "our" cover-ups/lies
III. People-orientated	III. Elite orientated
Focus on suffering all over; on women, aged children, giving voice to voiceless	Focus on "our" suffering non-disabled bodied elite males, being their mouth-piece

Peace/conflict journalism	War/violence journalism
a Give name to all evil-doers Focus on people peace-makers	give name to their evil-doers focus on elite peace-makers
IV. Solution orientated Peace = non-violence + creativity Highlight peace initiatives, also to prevent more war Focus on structure, culture, the peaceful society Aftermath: resolution, reconstruction, reconciliation	IV. Victory orientated Peace = victory + ceasefire Conceal peace-initiative, before victory is at hand Focus on treaty, institution, the controlled society Leaving for another war, return if the old flares up again

Rights and permissions

Reprints and permissions

Copyright information

About this paper

Cite this paper

Peter, A., Omole, R., Misra, S., Garg, L., Oluranti, J. (2023). Machine Learning Approaches for Classifying the Peace-War Orientations of Global News Organizations' Social Media Posts. In: Garg, L., *et al.* Information Systems and Management Science. ISMS 2021. Lecture Notes in Networks and Systems, vol 521. Springer, Cham. https://doi.org/10.1007/978-3-031-13150-9_26

Download citation

Publish with us

Policies and ethics

Access this chapter

Log in via an institution

Chapter

EUR 29.95
Price includes VAT (Nigeria)

- Available as PDF
- Read on any device
- Instant download
- Own it forever

Buy Chapter

eBook

EUR 139.09

Softcover Book

EUR 169.99

Tax calculation will be finalised at checkout
Purchases are for personal use only

Institutional subscriptions

- Sections
- References