HATIAN IMMIGRANTS IN SPRINGFIELD – FOR BETTER OR WORSE

A NLP sentiment analysis based on three news articles

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In this paper I perform a text mining sentiment analysis based on three related news articles published by NewsNation, NPR(online News) and The Blaze. Springfield, Ohio has become a prominent topic in public discourse particularly because of a controversial remark made by Donald Trump, a presidential aspirant during a presidential debate. Local reactions to the arrival of thousands of Haitian immigrants in Springfield, Ohio have been mixed in recent years. The aim of this analysis is to infer from these articles the sentiment of locals toward the influx of Haitian Immigrants into Springfield.

Analysis

1. Screenshots of three news versions

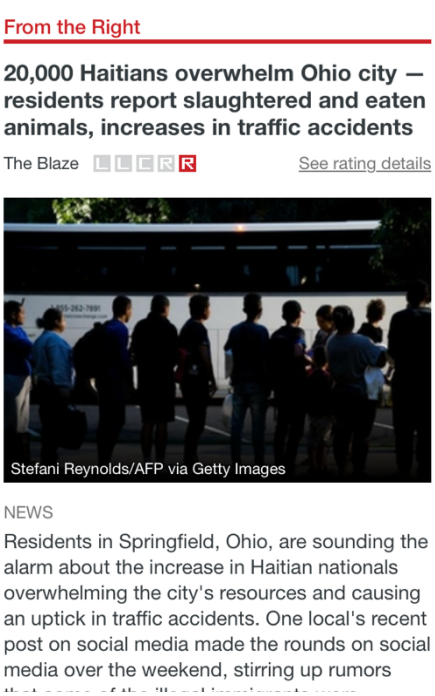

Fig 1 Right wing News, Article 1

Fig 2 Left wing News, Article 2

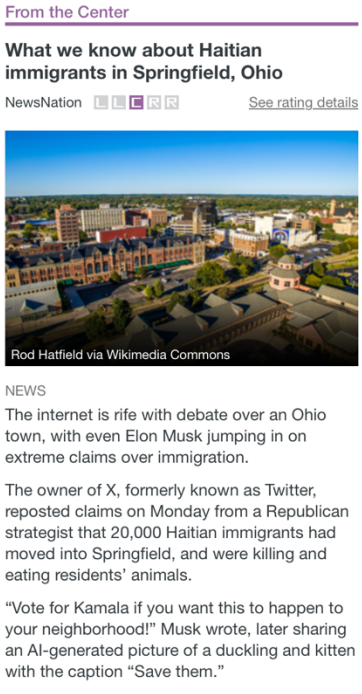

Fig 3 Center News, Article 3

2. WordCloud images of the three news versions

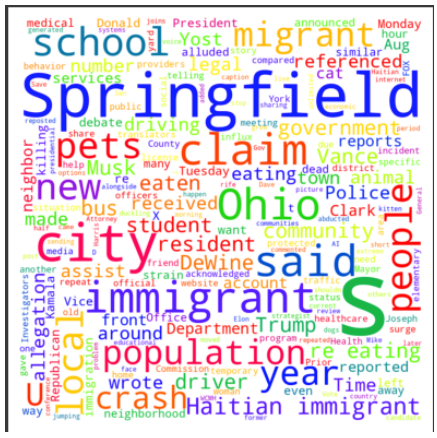

Fig 4 WordCloud Article 1

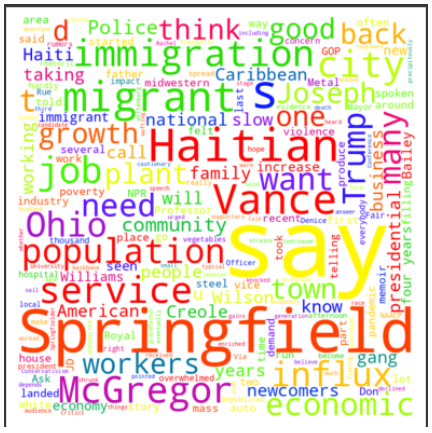

Fig 5 WordCloud Article 2

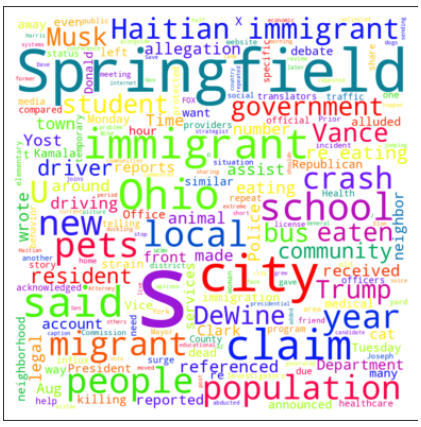

Fig 6 WordCloud Article 3

3. Bar charts of 20 most frequent words

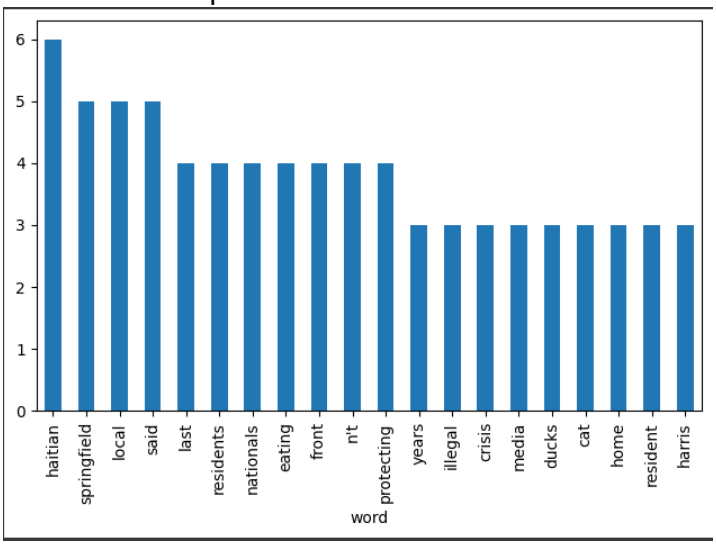

Fig 7 Bar Chart Article 1

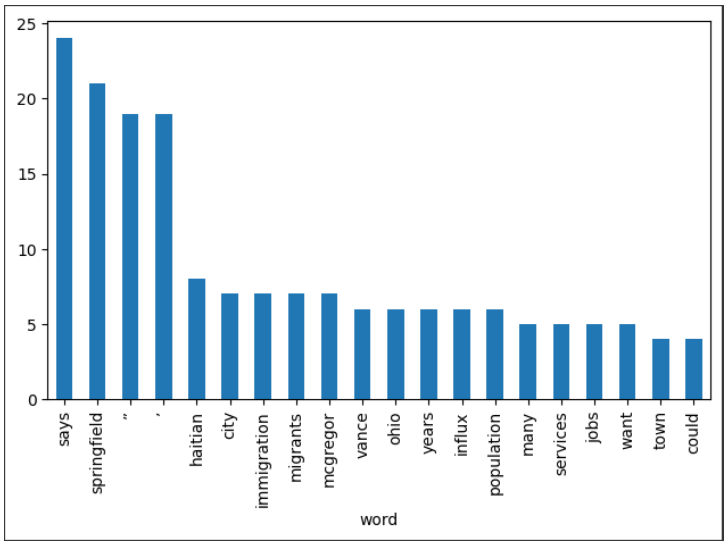

Fig 8 Bar Chart Article 2

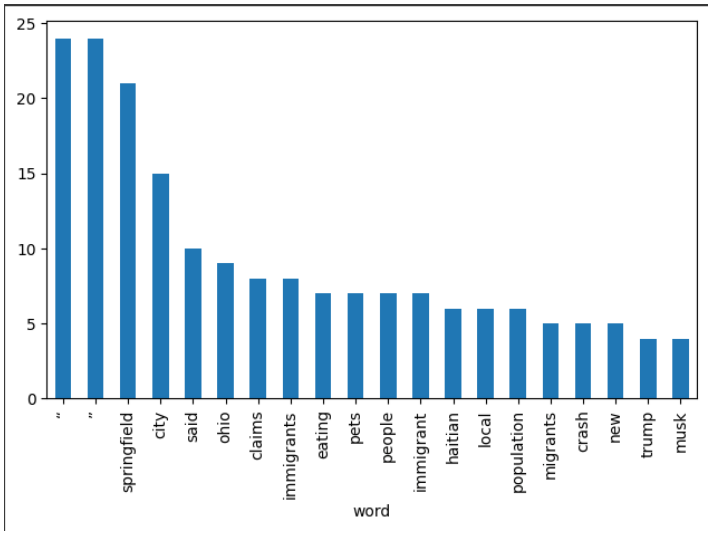

Fig 8 Bar Chart Article 3

4. Table showing sentiments of news article

Table 1 Scores of Sentiment Analysis

News Article	Negative Score	Neutral Score	Positive Score	Compound score
Article 1 (Right version)	0.084	0.876	0.04	- 0.9817
Article 2 (Left version)	0.08	0.85	0.07	- 0.9743
Article 3 (Center version)	0.098	0.841	0.06	- 0.9958

Discussion

There are distinct differences between the sentiment scores of the three articles, possibly because of biases or editorial slants on the part of the news outlets that published the articles. referring from values of table 1 above, article 1 scores suggest even though the article may present information in a factual manner, there is a notable negative tilt or tone that hints an unfavorable outlook on the topic. Similar to article 1, article 2 also has a strong neutral tone (85% neutral). However, it has a slightly higher positive score (0.07 vs. 0.04). This slight positivity may reflect a more balanced tone compared to Article 1, but the overall sentiment remains negative. The strongest negative sentiment (0.098) is found in article 3, suggesting an extreme critical attitude or strong bias towards the subject. Based on the scores, article 1 could come from an outlet that attempts to appear balanced while pushing a critical/negative agenda while maintaining a neutral tone. Article 2 aims for a slightly more balanced tone with a small positive sentiment, potentially attempting to provide more objectivity or to appear less pessimistic and Article 3, with its highest negative sentiment and compound score, may reflect an outlet that frequently adopts a more critical or pessimistic view of events or topics.

Fig 6 wordcloud article 3 emphasizes terms like Haitian and immigrant, as well as government and pets eaten, suggesting this outlet might be focusing on sensational or controversial aspects, possibly highlighting immigration in a negative context. *Fig 5 wordcloud article 2* shows more positive terms like job, service, and growth alongside immigration-related terms. This outlet may be focusing more on the economic impact of immigration and community services. *Fig 4 wordcloud article 1* shares similarities with *Fig 6 wordcloud article 3*, with a notable emphasis on crash, school, and pets, potentially indicating that this outlet might be prioritizing local news alongside immigration coverage. Each channel may be selecting different views to appeal to their audience, as evidenced by the variations in tone and key terms chosen by each outlet. For example; While the Left version article emphasis on economic growth and services might appeal to a more progressive audience, the right version outlet may exaggerate news connected to immigrants in order to incite anxiety or unease.

The center version might combine sensationalism with regional issues while retaining a critical viewpoint and emphasizing the community.

Conclusion

To a news customer, natural language analysis may be useful in that, it helps the customer understand and recognize media bias and tone. In the analysis above, all articles had a negative tone with varying degrees of negativity, which could alert a reader that the coverage may be sensationalized or negatively skewed. Natural language analysis will help the news customer

become a more engaged, informed reader by comparing different perspectives. It ultimately leads to a more discerning consumption of news, reducing the risk of being misled or sensationalized by news reports.

References

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Appendix

https://colab.research.google.com/drive/1oMoOhnrd7ijrJ3tXrregpeVtaCIizBEh?usp=sharing