Detecting bias through user interaction
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Abstract
A major task in the field of sentiment analysis is understanding how a person conceptually links diverse concepts or ideas and finds ways to display those relationships. We describe a gamified web-based tool for exposing user sentiment about news articles based on the user’s political affiliations and their sensitivity to perceived bias in those articles. Our challenge is the complexity of engaging the user in this solo act of understanding their own sentiment. A problem is finding articles to use for the experiment that expresses a suitable range of political bias. There is no existing corpus, so we create it on the fly. Users enter the site and state their political leaning. They are then presented with a recent news article [2] that is accompanied with a sentence from a source that has a different political viewpoint [1]. The task is to isolate a sentence [3] in the full article that presents the idea of the test sentence in context. They input the measure of bias they perceive [4] in the article and get to compare that with their peer’s assessments. We use previous user responses and a bias detection algorithm to show how the current user’s response compares to other members of the same political affiliation. From this we are able to build a dataset comprised of sentences that users see as related to their political leaning. Other members of the same political affiliation will not be able to tell and will select a uniform set of sentences. As more people use this site, we hope to build a dataset that is comprised of sentences that users see as related and provides insight into how groups users with differing political leanings will interpret the news differently, by showing differing opinions of how certain news organizations are biased.

Methods
- First Iteration – Google Chrome extension to highlight biased sentences in online news articles via keyword detection algorithm.
- Second Iteration – To increase user engagement, we created a website that showed the user a sentence and a recent news article for which the user had to select a related sentence in the article. The website record how the user perceived the bias of the article given via a slider that the user would use. The user would also be provided feedback based on the sentences they selected.

Hypothesis
In future experiments, we hope to show that users with political affiliations different from those of the organization of the given article will focus on the same sentence, believing that they are biased while those with the same political affiliation will not be able to tell and will select a uniform set of sentences. As more people use this site, we hope to build a dataset that is comprised of sentences that users see as related and provides insight into how groups users with differing political leanings will interpret the news differently, by showing differing opinions of how certain news organizations are biased.

References

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