# An Analysis of the Jackson Mississippi Water Crisis using Social and Mass Media

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In this paper, we will present an analysis of social media posts and mass media communications during the 2021 Jackson Water Crisis. Recently there has been a transition in how citizens acquire news and information about important events. Traditionally, print and broadcast media played a major role in determining what events to cover and how to shape stories for the audience. In recent years, social media has changed the way most people consume information about current events (Hermida, 2010). Social media has also allowed citizens to join in the conversation and contribute to the discussion in real-time. Today, when there is a crisis or significant event, citizens take to social media, especially Twitter, to post facts, opinions, concerns, suggestions and, sometimes, misinformation. During the Jackson Water Crisis, many people used social media to ask for help, prayers, and donations. They used a range of hashtags, including #JacksonWaterCrisis, #JxnNeedsWater, #JxnWater, #EnvironmentalJustice, #infrastructure, and others. The figure on the left below shows the number of related tweets over the acute time period of the crisis. The word cloud on the right visualizes the common words in these tweets. This data is a largely untapped resource of valuable information for community leaders and first responders.
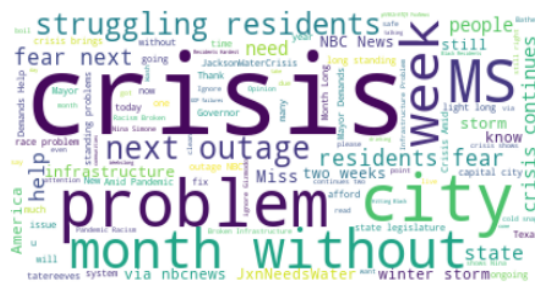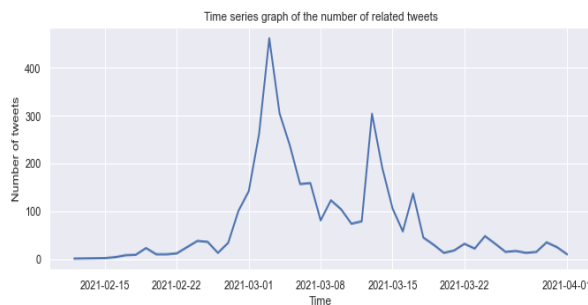
We analyze both social media posts and print media related to the Jackson Water Crisis. Data is collected and statistically summarized to align with the timeline of the crisis. Sentiment analysis and topic modeling of the social media posts will provide a high-level understanding of the effect of the crisis (Wang et al., 2018; Xiong et al., 2020). An attempt to classify posts by their purpose (complaint, suggestion, fact, question, etc.) will be made. Using an appropriate lexicon, the topic of the posts will be elucidated, for example, health concerns, inequality, infrastructure, and leadership concerns. Results of the analysis will include a range of visualizations to convey the information in a natural and effective way.

While the Jackson Water Crisis was initially a local story, it eventually became a national story. We track the coverage of the crisis in print media to attempt to shed light on the concern that it took too long for the national media to take notice.

It is helpful to do such post-crisis analyses and aggregate issues and concerns in retrospect. The analysis can be used to inform policy decisions, but more importantly, it can lead to a practice that can aid communities in real-time when a crisis occurs. We argue there is a need for a flexible citizen crowd-sourced crisis communication tool or dashboard to 1) keep citizens informed during a crisis, 2) provide real-time data for city managers and decision-makers, and 3) create a historical record to allow communities to be more resilient in managing future disasters better.

References

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