Sentiment Analysis of Covid-19 Tweets



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We created a **Sentiment Analysis Tool** that displays sentiments
towards Covid-19 evaluated by our
big data NLP approach at national
and state levels.

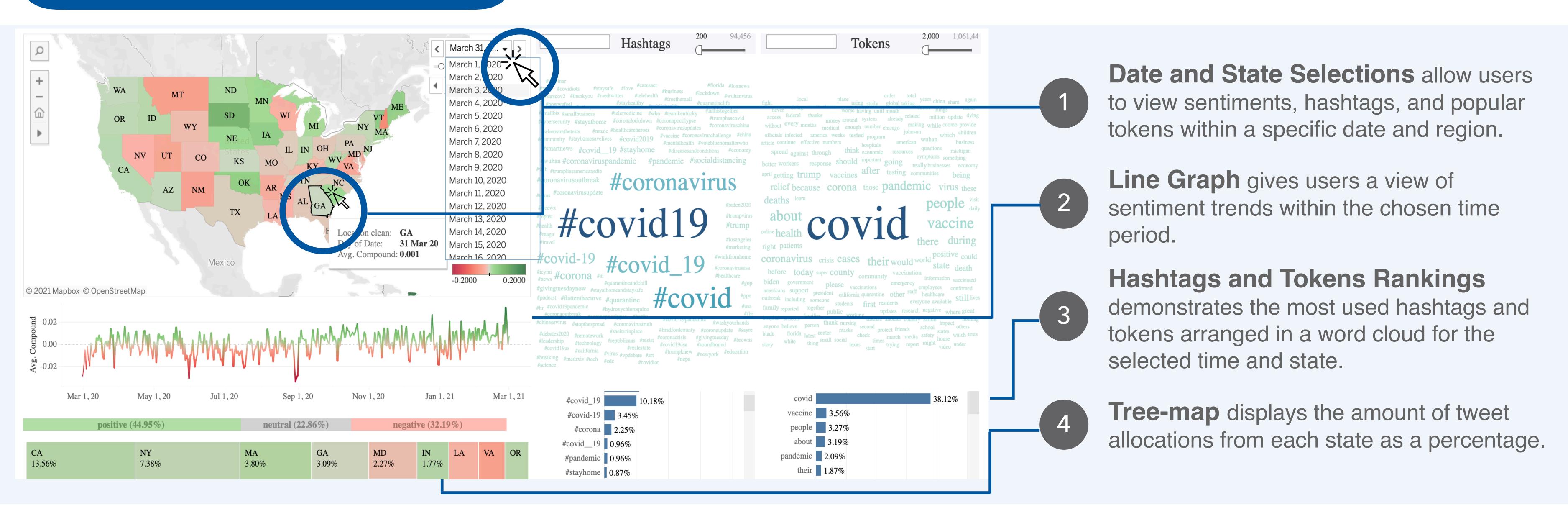
Try it here: https://reurl.cc/529QD6

Fighting Covid with Tweet Sentiment Analysis

- 1. Controlling Covid-19 depends on an individual's reaction to policies.
- 2. Sentiment analysis on a large scale is key to understanding state-level emotions regarding certain policies.

Sentiment Analysis Algorithm & Visualization

- 1. We developed a Vader(NLP algorithm) model that analyzes ~20GB of Twitter data obtained via downloading/scraping that categorized Tweets into positive, negative and neutral segments.
- 2. We made an interactive choropleth map dashboard that allows users to explore sentiments with time and location inputs. Word clouds and line graphs provide more indepth information.



What's New?

- 1. We improved on the current state of sentiment analysis by using our model on a much larger data set and classifying our data into more dimensions, including emotions, locations, and time.
- 2. Our improvements allow us to validate our model accuracy by comparing sentiment levels with key milestone events for which the outcomes are already known.

Evaluation

- Evaluated results by matching the sentiment changes to major events in 2020 like: Stay Home Order, US Record High Confirmed Daily Cases, COVID-19 Vaccination Initiation, etc.
- 2. Our results matched expected sentiment changes for these events.
- 3. Our methods are at least on-par with current methodology and we have conducted analysis on a deeper granularity than current approaches (on a much bigger dataset).