Twitter Sentiment Analysis for Russia-Ukraine Conflict in March, 2022

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Abstract

Twitter is one of the many organizations and social media platforms that have been exploited by and misused by organizers and supporters on either side conflicts. People hope to use the platform to express beliefs and ideas that are not verified or peer reviewed. If negative and or positive sentiments exist in the collection of tweets during the month of March 2022 about the conflict in Ukraine it can come from a popular outlet or an unverified user. Either way the belief or idea expressed causes ripple effects and become a popular concept regardless of the legitimacy or actual truth associated with it. The lack of clarity and substantiated evidence creates and spreads ideas faster than any other conflict to date.

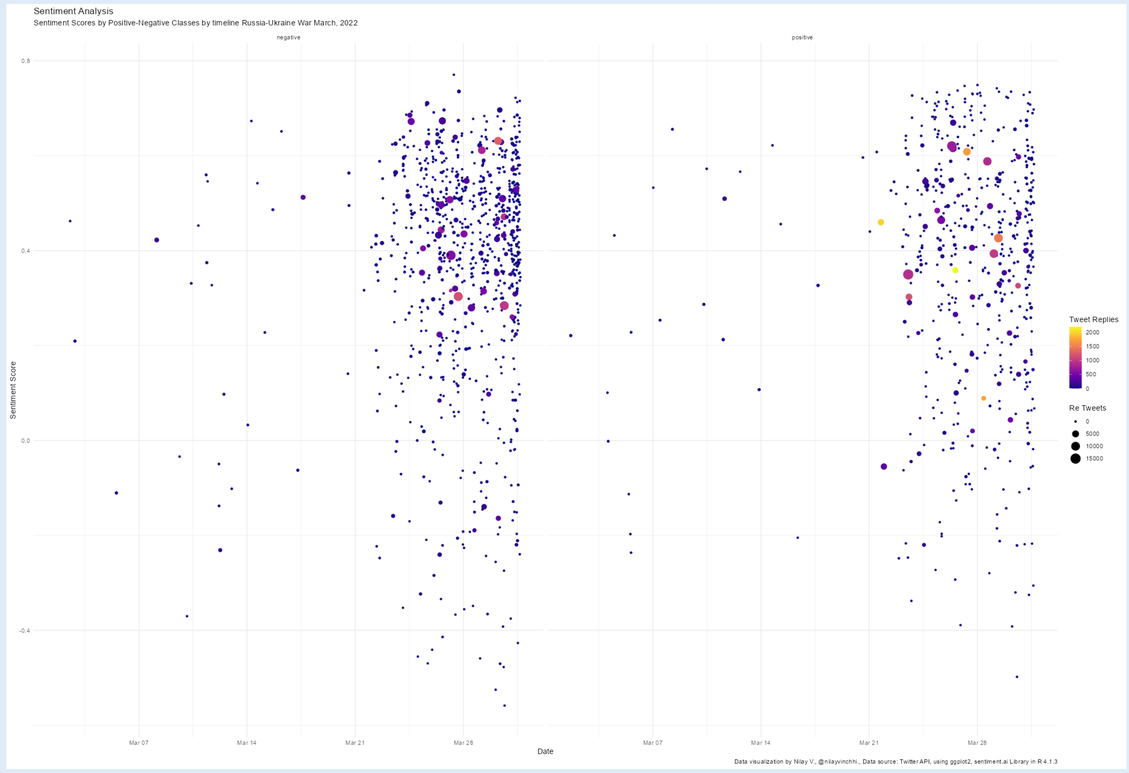
Introduction

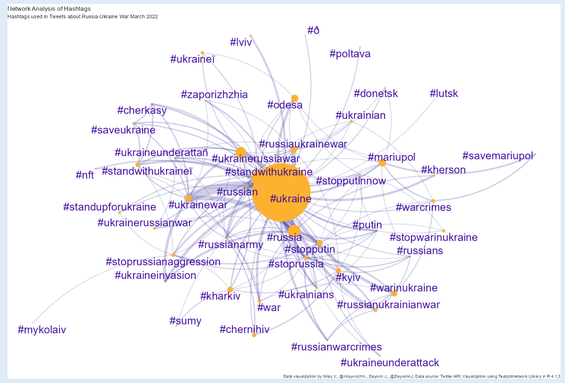
Twitter has documented a significant amount of activity in the Russian-Ukrainian Conflict via its live stream feature. The conflict which began in February 2022, has been reported by multiple news outlets across the world. Unfortunately, the reports on Twitter are of misinformation in journalism; there have been cybersecurity vulnerabilities exploited by entities within either country involved in the conflict. The overwhelming theme is that different feelings and ideas about the conflict are being spread on social media. Many of these ideas are popular and only being expressed in Ukraine because the majority of tweets are in English. Twitter information was not widely available from Russia because it was in a different language and was not able to be extracted without translating the information that could potentially damage the original sentiment.

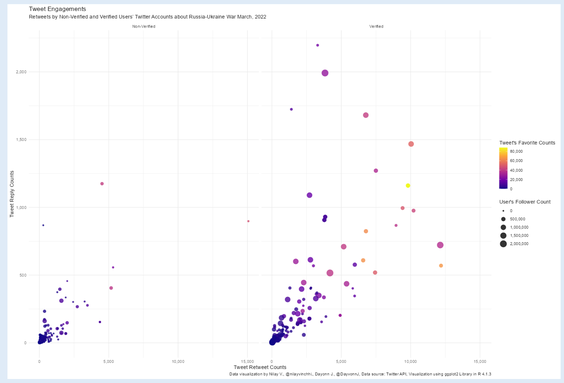
Objectives

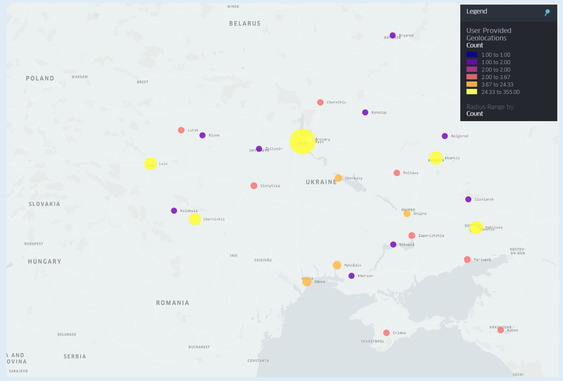
Collect data from Twitter and report and analyze the sentiment from various Twitter accounts to understand the thoughts and feelings about the Russia Ukraine War in March 2022.

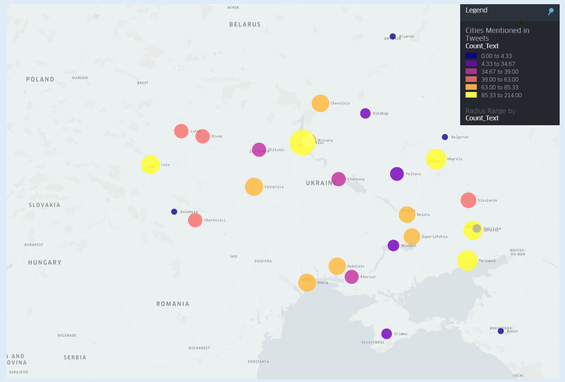
Results

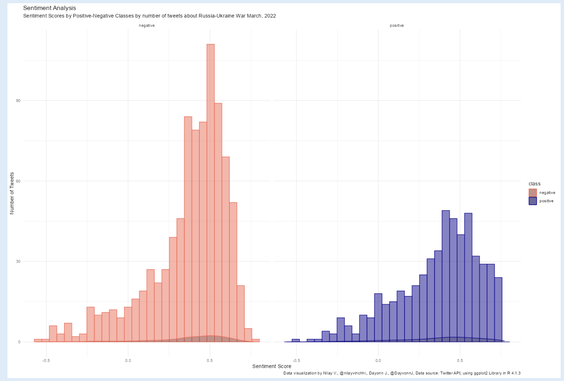












Methods

The data was analyzed solely with the software R Studio. Data on engagement statistics were collected from the dataset that contained the number of retweet counts and the number of replies and were sorted from verified and unverified accounts. The ggplot2 library was used to express the engagement tweets by user verification. A bubble chart was created to express the volume of tweets with sentiment of the war based upon the geolocation. Data cleaning was performed to extract the user's provided location from the Twitter API rtweet. The sentiment.ai package was used to score the text from the tweets and arrange by negative and positive comments on the ongoing conflict.

Future Directions

Data containing languages that were a part of the data and not in the English language were removed, but in the further analyses translate the textual information may be translated for sentiment analysis. The sentiment analysis visualizations are not definite and are sporadic in design, there are deficiencies that need to be examined in the data cleaning process for visualization.