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Twitter Sentiment Analysis of Major US Topics

The user base for social media platforms have seen sharp increases in nearly every year since their inception, to the point where it is a part of a daily routine in today's society. Social media provides a powerful public platform for people to express their opinions and intentions regarding almost any topic. The objective of this study was to determine how the opinions of topics related to United States politics shift over the course of the election cycle and through the inauguration of the next president. These topics included the opinions of major events such as the major presidential candidates Joe Biden and Donald Trump, appointment of Supreme Court Justice Amy Coney Barrett, the #BlackLivesMatter movement, the 2021 Storming of the United States Capitol, and the controversy surrounding mail-in ballots. The Twitter API was accessed using the tweepy library to survey public opinion and collect the sample size of over 1 million tweets. The data was then analyzed using the nltk and text2emotion libraries. The sentiment of the tweets were analyzed by search keyword, by date, and by sentiment over time by keyword.

Arpan Das is a senior studying Computer Engineering at the Missouri University of Science and Technology, and is expected to get his B.S. in May 2021. Along with being an undergraduate research assistant, he also works for New Student Programs as a PRO Leader. He is also a member of the Missouri S&T Band and Orchestra, playing the violin, and is a member of the Honorary Band Fraternity Kappa Kappa Psi.