

## Using Twitter Data for Assessing Home Violence During the Covid-19 Pandemic

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The outbreak of COVID-19 has triggered a worldwide health crisis that has influenced how we view the world and live our daily lives. It has resulted in both negative and positive impacts. Home Violence (HV) is one of the most common forms of violence, and it has grown into a huge global issue that affects everyone. Also, it is one of the adverse outcomes of the pandemic. At present, people are becoming increasingly dependent on social media platforms such as Twitter, Instagram, Facebook, YouTube, and other similar sites. They share their thoughts and opinions on daily events and occurring on these sites. Twitter is a real-time social media platform that allows users worldwide to connect via public and private messages which are chronologically structured on each account. Detecting the HV posts on social media has given immediate assistance to victims. It can create awareness about the HV and protect future victims. Moreover, it can provide valuable insights on HV to understand the severity of the issue. Our research study proposed a method to detect HV-related tweets during the COVID-19 period. More than 10,000 tweets were collected pertaining to the period from May, 2019 to April, 2021 using Twitter API. Then the data were pre-processed to clean the data. The word-embedding technique was used for pre-processed data set in data preparation. To construct the model, the data set was then split into training and testing data sets, and the Support Vector Machine (SVM) was applied. Finally, the model was evaluated using different evaluation metrics. The SVM model yielded an accuracy of 88.53%. Recall, precision, F1-score, and AUC for SVM model are 93.26 %, 97.07%, 92.00% and 84.00% respectively.

Keywords: Tweets, Home Violence, Covid-19, Support Vector Machine