

Analyzing sentiments in social media comments on the global recession: Unveiling the pulse of public opinion

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Today the world is facing a serious economic crisis, and even developed countries are trying to find solutions for this economic recession. This has become a global trending topic: finding solutions to economic crises. This study aims to develop a classification model to accurately identify public comments as “solution” or “not solution” from a pre-processed data set. In this research, a sentiment analysis was done by downloading about 4000 sample comments, from specific two social media videos related to the world economic recession titled “What's Coming Is WORSE Than A Recession”. Comments were manually labeled as "solution" or "not solution." The initial 25:75 ratio was adjusted using oversampling to achieve a 40:60 ratio for balanced analysis. Using Google Collab and Python Language, data preprocessing involved noise reduction, and removal of special characters, hashtags, custom patterns, and multiple spaces. Stop words were also extracted and eliminated. Using pre-processed data, a logistic regression (LR) model and a linear support vector classifier (SVC) model were trained, and model evaluation checked by different evaluation metrics such as accuracy, confusion matrix, and classification report were used to assess the performance of the model. Both models achieved over 75% accuracy. Specifically, LR model had an accuracy of 75.1%, with precision, recall, and F1-score of 0.75, 0.72, and 0.72, respectively. The SVC model performed slightly better, with an accuracy of 76.3% and precision, recall, and F1-score of 0.76, 0.74, and 0.74, respectively. A new dataset was used to check for predicted sentiment for each comment, providing valuable insights into the sentiment of previously unseen text. Using sentimental analysis, the goal was to comprehend how people from various backgrounds view the economic recession and the remedies they suggest. This model could be used to identify public opinions about the recession and prepare for the upcoming crisis and government finance control.

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