Sentiment Analysis using Machine Learninag

- **Title:** A Machine learning Approach

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Introduction:

- Sentiment analysis (or opinion mining) is a natural language processing (NLP) technique used to determine whether data is positive, negative or neutral.

- The Goal of the Project is develop a machine learning model for sentiment analysis

- Using machine learning for sentiment analysis enables automated processing of vast amounts of textual data, leading to more accurate and efficient sentiment classification.

Methodology :

- I employed the CRISP-ML(Q) methodology, utilizing supervised learning to train a sentiment classifier on labeled textual data.

- We used Kaggle Dataset for training and testing.

- The Object for this Project is Understand and classify the sentiment of user reviews.

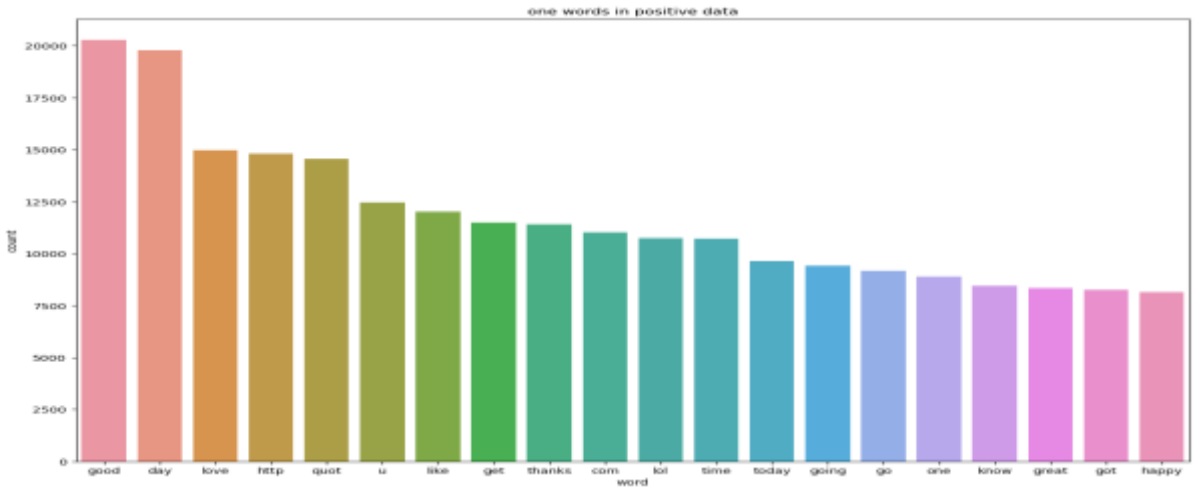
- We Took Only the columns called Text and Sentiment ,Text is Input Variable and the Sentiment is the Output Variable

- The preprocessing steps are Tokenization, stop words removal, stemming/lemmatization, punctuation.

- The Machine learning algorithms that are used Multinomial NB, Linear SVC, Logistic Regression.

- We Used Stream lit for deploying the Model.

Data Visualization :

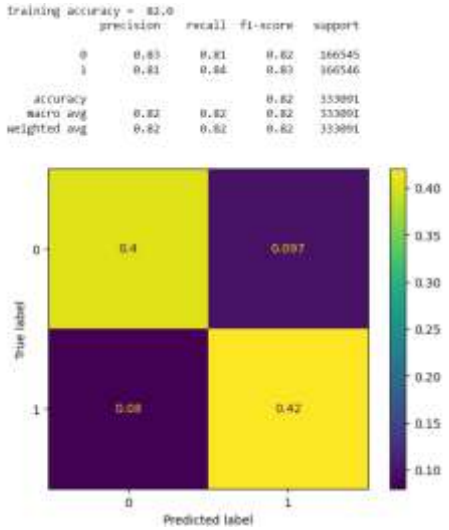


Inference:

- Positive data has words like Thank, love , LOL, Haha etc.
- Negative data has words like work, sad, tired, suck sorry.
- Some of the words are still common in both such as Lol, quote

Results :

Logistic Regression:



Stream lit :