**PROJECTTITLE**:**DECODING EMOTIONS THROUGH SENTIMENT ANALYSIS OF SOCIAL MEDIA CONVERSATIONS**

**PHASE-3**

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**LINK :**

**1.Abstract**:

This paper explores the use of sentiment analysis to decode emotions in social media conversations. By analyzing text data from platforms such as Twitter, researchers aim to identify emotional tones like joy, sadness, anger, and more using computational techniques.

**2.Introduction**:

Social media has become a central platform for public expression. Users often share their emotions, opinions, and reactions to events in real time. Sentiment analysis helps in identifying and interpreting these emotions to gain valuable insights into public mood and trends.

**3.Data Collection:**

Data is gathered from platforms like Twitter using APIs that allow retrieval of posts based on keywords, hashtags, and trending topics. This data provides a diverse and large-scale dataset for emotional analysis.

**4.Preprocessing Techniques:**

Before analysis, data must be cleaned. This includes removing noise such as URLs and emojis, tokenizing the text, removing stop words, and applying lemmatization or stemming to standardize the text

**5.Sentiment Analysis Approaches:**

Two primary approaches are used: (1) Lexicon-based methods that rely on pre-defined dictionaries of emotional words, and (2) Machine Learning methods that train models like Naive Bayes, SVM, or deep learning networks such as LSTM and BERT to classify emotions based on patterns in the data

**6.Emotion classification model :**

Decoding Emotions through Sentiment Analysis of Social Media Conversations

Common frameworks include Ekman's model with six basic emotions (joy, fear, anger, sadness, surprise, disgust), and Plutchik's wheel which maps more nuanced emotional relationships.

**7.Applications:**

Sentiment analysis aids in brand monitoring, mental health tracking, political forecasting, disaster response, and more. It helps organizations respond to public opinion and societal changes more effectively

**8.Challenges and Limitations:**

Understanding sarcasm, slang, and cultural context remains difficult. Multilingual data and code-switching add complexity, while the sheer volume of social media posts demands efficient processing systems.

**9.Conclusion:**

Sentiment analysis is a powerful tool for decoding emotions in social media, but it faces challenges that require ongoing research. Future work may focus on improving model accuracy and addressing linguistic nuances