

Source code :

```
import nltk
import pandas as pd
import matplotlib.pyplot as plt
from nltk.sentiment.vader import SentimentIntensityAnalyzer
from google.colab import files
import io # Import the 'io' module

# Download VADER lexicon and punkt tokenizer
nltk.download('vader_lexicon', quiet=True)
nltk.download('punkt', quiet=True)

def analyze_sentiment(text):
    analyzer = SentimentIntensityAnalyzer()
    return analyzer.polarity_scores(text)

def decode_emotion(sentiment_scores):
    compound = sentiment_scores['compound']
    if compound >= 0.05:
        return "Positive"
    elif compound <= -0.05:
        return "Negative"
    else:
        return "Neutral"

# Upload CSV file
print("Upload your social media conversations CSV file.")
uploaded = files.upload()
file_name = next(iter(uploaded))
df = pd.read_csv(io.BytesIO(uploaded[file_name]))

# Check for 'text' column
if 'text' not in df.columns:
    print("Error: CSV must contain a 'text' column.")
else:
    # Apply sentiment analysis
    df['sentiment_scores'] = df['text'].apply(analyze_sentiment)
    df['emotion'] = df['sentiment_scores'].apply(decode_emotion)

# Display results
print("\nSentiment Analysis Results:")
print(df[['text', 'emotion']].head())

# Emotion distribution
emotion_counts = df['emotion'].value_counts()
print("\nEmotion Distribution:")
print(emotion_counts)

# Visualize
plt.figure(figsize=(6, 4))
emotion_counts.plot(kind='bar', color=['skyblue', 'lavender', 'pink'])
plt.title('Emotion Distribution')
plt.xlabel('Emotion')
plt.ylabel('Count')
plt.xticks(rotation=0)
plt.tight_layout()
plt.show()
```