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!pip install textblob matplotlib wordcloud

import pandas as pd

from textblob import TextBlob

import matplotlib.pyplot as plt

from wordcloud import WordCloud

comments = [
    "I absolutely love the new AI tools, they make life so much easier!",
    "This update is terrible. Everything is broken now.",
    "Not sure how I feel about the new layout. It's different.",
    "Amazing experience! Will definitely recommend to others.",
    "Worst app ever. Crashes all the time.",
    "It's okay, nothing special though.",
    "Incredible design and functionality. Well done!",
    "I hate the new update. Why did they change it?",
    "Great customer service and fast delivery!",
    "Meh, I've seen better."
]

df = pd.DataFrame(comments, columns=['Comment'])

def get_sentiment(text):
    polarity = TextBlob(text).sentiment.polarity
    sentiment = 'Positive' if polarity > 0 else ('Negative' if polarity < 0 else 'Neutral')
    return pd.Series([polarity, sentiment])

df[['Polarity', 'Sentiment']] = df['Comment'].apply(get_sentiment)

print("Sample Results:\n")

print(df)

def plot_sentiment_distribution(df):
    sentiment_counts = df['Sentiment'].value_counts()
    colors = {'Positive': 'green', 'Negative': 'red', 'Neutral': 'gray'}
    sentiment_counts.plot(kind='bar', color=[colors[i] for i in
    sentiment_counts.index])
    plt.title('Sentiment Analysis Results')
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plt.xlabel('Sentiment')
plt.ylabel('Comment Count')
plt.show()

def generate_wordcloud(df):
    text = ' '.join(df['Comment'])
    wordcloud = WordCloud(width=800, height=400,
                          background_color='white').generate(text)
    plt.figure(figsize=(10, 5))
    plt.imshow(wordcloud, interpolation='bilinear')
    plt.axis('off')
    plt.title('Word Cloud of Comments')
    plt.show()

plot_sentiment_distribution(df) generate_wordcloud(df)
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