AI Agent: Sentiment-Based Email Responder

1. Problem Statement

The objective is to build an AI Agent that analyzes the sentiment of incoming emails and generates appropriate automated responses. This can be used in customer support systems to handle basic emails efficiently.

2. Tools and Libraries Used

- Python
- pandas
- TextBlob
- fpdf (for report generation)

These libraries were used for data handling, sentiment analysis, and report generation.

3. Working Explanation

The system takes input as a list of email texts. Each email is analyzed using TextBlob for sentiment polarity. Based on the polarity score:

- Positive sentiment generates a thankful response.
- Negative sentiment triggers an apology with assurance.
- Neutral sentiment receives a follow-up prompt.

Results are shown in a DataFrame with email, sentiment, and auto-response.

4. Sample Output

Email: Thank you so much for your help. I really appreciate it!

Sentiment: Positive

Response: You're welcome! Glad I could assist you.

AI Agent: Sentiment-Based Email Responder

Email: I am extremely disappointed with your service.

Sentiment: Negative

Response: We're sorry to hear that. We'll look into it as soon as possible.

Email: Can you please provide more information about the product?

Sentiment: Positive

Response: You're welcome! Glad I could assist you.

Email: The delivery was on time and the packaging was excellent.

Sentiment: Positive

Response: You're welcome! Glad I could assist you.

Email: I'm unhappy with the delay in your response.

Sentiment: Negative

Response: We're sorry to hear that. We'll look into it as soon as possible.