**Emotion-Aware Chatbot for Customer Support**

**Abstract**

In today’s digital era, customer support systems must go beyond scripted responses to deliver truly empathetic and effective service. This project introduces an **Emotion-Aware Customer Support Chatbot** that dynamically detects user emotions and responds appropriately using a combination of machine learning and generative AI.

First, a sentiment analysis model is trained on real-world textual data to classify incoming customer messages into emotional categories such as happy, sad, angry, worried, or neutral. Upon receiving a query, the chatbot preprocesses the user's input and predicts the sentiment using a Naive Bayes classifier pipeline. Once the sentiment is identified, the chatbot leverages the **Cohere Generative AI API** to craft personalized and emotion-sensitive responses in real-time, ensuring that users feel heard and supported.

By combining traditional machine learning for emotion detection with cutting-edge large language models for dynamic reply generation, this system enhances customer engagement, reduces response time, and improves overall service quality. The final application is built using **Flask** for easy deployment, and the model can be further extended to handle more complex customer scenarios with minimal modifications.

This project demonstrates the powerful integration of **Natural Language Processing (NLP)**, **sentiment analysis**, and **generative AI** to redefine customer support interactions, making them more human-like, empathetic, and efficient.