✨ Brief Insights from Twitter Sentiment Analysis (US Airlines)

1. 📊 **Sentiment Distribution**
    - Over **60% of tweets are negative**, reflecting dissatisfaction among airline passengers.
    - Only a small portion (~15%) of tweets were positive, indicating room for improvement in customer experience.
2. 🏢 **Airline-wise Sentiment**
    - **United Airlines** and **American Airlines** received the **most negative tweets**.
    - **Virgin America** had relatively more positive sentiment, possibly due to better service or branding perception.
3. 🗓️ **Time-Based Trends**
    - Spikes in negative sentiment correlated with specific dates — likely due to delays, cancellations, or operational disruptions.
    - Positive sentiment remained relatively steady but much lower in volume.
4. ☁️ **Common Complaints (Negative WordCloud)**
    - Most frequent negative terms: *delay*, *cancelled*, *customer service*, *late*, *gate*, *hours*
    - Suggests operational and service issues are the primary pain points for customers.
5. 😊 **What Customers Appreciate (Positive WordCloud)**
    - Positive tweets focused on *thank you*, *great flight*, *helpful staff*, and *love* — showing the importance of personalized service.
6. 📈 **TextBlob vs VADER Sentiment Models**
    - **VADER** was more sensitive to negative sentiment in tweets (better suited for social media).
    - **TextBlob** often rated tweets as neutral or slightly positive — useful but more generic.

✅ **Final Verdict:**

This project clearly showcases how **NLP** can help businesses monitor and respond to **real-time public sentiment**, enabling better decision-making, customer service improvement, and brand management.