OkadaGirlLogistic

A smart delivery log and feedback management app for nigerian logistics services

INTRODUCTION:

In Nigeria's fast-growing logistics sector, small and medium-sized logistics businesses face challenges in efficiently tracking deliveries, analyzing customer feedback, and visualizing performance trends. OkadaGirlLogistic is a Streamlit-powered web application designed to simplify delivery tracking, feedback management, and sentiment analysis for logistics companies. This project was developed as part of the June Knowledge Showcase under the 3MTT program to demonstrate real-world, data-driven problem-solving.

PROBLEM STATEMENT:

Many logistics businesses in Nigeria lack a centralized digital system to:

- Log delivery operations and monitor delivery status.
- Collect and analyze customer feedback.
- Understand sentiment trends and satisfaction levels.
- Generate reports or visualize performance over time.
- Download operational data in various formats for documentation or analysis.

This leads to inefficiencies, delayed response to service issues, and reduced customer satisfaction.

PROPOSED SOLUTION:

OkadaGirlLogistic is a single-page web app that:

- Allows customers to submit delivery feedback.
- Uses sentiment analysis to automatically evaluate customer mood.
- Enables an admin user to view delivery trends, feedback logs, summary statistics, and sentiment distribution.
- Includes location auto-suggestion and maps delivery points using geocoding.
- Exports logs in JSON, CSV, and Excel formats.
- Provides time series visualizations and pie charts for status, ratings, and sentiments.

This solution is intended to be easily adaptable by any logistics company, not limited to OkadaGirlLogistic alone.

METHODOLOGY:

The app was built using the following stack:

- **Frontend/UI**: Streamlit for simple and interactive web components.
- **Data Storage**: JSON for storing delivery records locally.
- **Sentiment Analysis**: TextBlob for classifying feedback as Positive, Neutral, or Negative.
- **Geolocation**: Geopy with Nominatim API to convert delivery destinations into coordinates.
- **Visualization**: Plotly and Streamlit maps for trend and spatial insights.

Key features implemented include:

- Admin login system with password protection (`admin123`).
- Delivery log form with customer, destination, feedback, rating, and status.
- Automated feedback sentiment classification.
- Real-time table filtering/searching and color-coded sentiments.
- Charts and metrics for performance review.
- Export buttons to download logs.

RESULTS & IMPACT:

The app has been successfully deployed and tested with sample data. Key outcomes include:

- Immediate feedback loop from customers.
- Insightful analysis of delivery performance over time.
- Simplified data management through downloadable logs.
- Geospatial view of delivery destinations.
- Ready-to-deploy template for multiple logistics firms.

CONCLUSION:

OkadaGirlLogistic demonstrates the practical application of data science and software development in solving real business problems. It not only digitizes delivery operations but adds intelligence through automated sentiment analysis and performance visualization. Though named after a fictional company, the app's structure makes it a general-purpose logistics tracker that any company in Nigeria can adopt. It was built using open-source tools and deployed via GitHub and Streamlit Cloud, showcasing the power of accessible tech in business transformation.

Future Improvements:

- Multi-user support with individual company logins.
- Real-time cloud database integration.
- Advanced route optimization using geospatial APIs.
- SMS/email notification integration.