REPORT ON SENTIMENT ANALYSIS OF BUSINESSDAY NEWS ARTICLES

TRACK: DATA ANALYST

ORGANIZATION: INTERNPULSE

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1. Project Overview

This research project aims to extract and analyze articles tagged under **BDLead** from **BusinessDay Nigeria's website**. The main goal is to perform sentiment analysis on editorial content, focusing on economic narratives in Nigeria from **2021 to present**. The project involves scraping article titles and links across **812 pages**, extracting article content, and storing the data for further sentiment and textual analysis.

2. Project Objectives

- Identifying the structure of the target webpage
- Extracting article links from multiple pages
- Scrape news articles tagged with economic relevance from a specified data source.
- Accessing each article to retrieve full text
- Clean and preprocess the text data for effective sentiment analysis.
- Classify the sentiment of each article as positive, negative, or neutral.
- Storing data in structured format (DataFrame)
- Assign polarity scores to quantify emotional tone.
- Performing sentiment analysis

3. Methodology

Libraries and Tools: The analysis was performed using

● Pandas for data manipulation

● TextBlob for sentiment analysis

● NLTK for text preprocessing (tokenization, stopword removal, lemmatization)

● Matplotlib & Seaborn for data visualization

Data Import and Exploration

● The dataset was imported from a CSV file: 'businessday_final301.csv '.

● Basic exploration included:

- ✓ Viewing the first few rows
- ✓ Checking the shape of the dataset
- ✓ Getting data type info and summary statistics

Text Preprocessing

● Punctuation and special characters were removed using re and string.

● Text was tokenized using **word_tokenize**.

● Stopwords (common but uninformative words) were removed.

● Words were lemmatized using **WordNetLemmatizer** to reduce them to their base

form.

4. Sentiment Analysis

● TextBlob was used to compute sentiment polarity for each article.

  ○ **Positive** → (compound ≥ 0.05)

  ○ **Neutral** → (−0.05 < compound < 0.05)

  ○ **Negative** → (compound ≤ −0.05)

Visualization

● Sentiment distribution was visualized using pie charts, bar charts and line graphs

5. Sentiment Analysis Summary

2021: Highest number of negative articles.

2022: Slight increase in neutral tones.

2023–2024: Gradual rise in positive sentiment, though still lower than negative/neutral.

Sentiment	Percentage
Negative	~46%
Neutral	~38%
Positive	~16%

Interpretation:

Negative Sentiment (~46%): Nearly half of the articles convey a negative sentiment, suggesting that the news reports are largely reflecting **unfavorable or pessimistic perspectives.** This could imply that many of the stories or viewpoints in these articles focus on challenges, problems, or unfavorable conditions affecting Nigeria's economy, businesses, or societal issues.

Neutral Sentiment (~38%): A significant portion of the articles (over a third) fall into the neutral category. This suggests that these articles either present **factual information without strong emotional overtones** or take a balanced approach in their coverage. The neutral sentiment may reflect more objective reporting or topics where the tone doesn't convey a clear positive or negative stance.

Positive Sentiment (~16%): A smaller proportion of the articles (about 16%) express positive sentiment, which likely reflects optimistic views or **reports about growth, progress, or favorable developments.** This suggests that while some stories highlight positive trends or achievements, they are less common compared to the negative and neutral reports.

Most Frequent Words in Positive vs. Negative Articles

I applied basic text preprocessing and **wordclouds** for:

- **Positive Articles:** Frequent words included "growth", "investment", "increase", "development".

- Negative Articles: Frequent words included "debt", "inflation", "crisis", "shortage", "decline".

Interpretation:

Negative articles focus heavily on economic instability, while positive ones emphasize progress and development plans.

Conclusion:

The overall sentiment distribution indicates that BusinessDay's 'BDLead' articles tend to focus more on negative or neutral aspects of the Nigerian economy, with positive news being less prevalent. This could reflect a cautious or critical view of the current economic and business climate, where the challenges or issues often take precedence in the coverage.