Internship Project Report

Project: Twitter Data Analytics

(Dynamic Performance Dashboard)

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Role: Data Analytics Intern

Tools used: Power BI, Excel, DAX

1. Introduction :

This report summarizes the data analytics project completed during my internship. The project involved analysing Twitter interaction data to provide actionable insights into user engagement, media performance, and temporal trends.

2. Background :

The organization required a way to monitor tweet performance that aligns with specific operational shifts and strict data quality standards. I was tasked with transforming a raw dataset (tweet.xlsx) into a dynamic dashboard that adapts to India Standard Time (IST).

3. Learning Objectives :

- To master advanced data cleaning techniques using Power Query.
- To implement complex time-based logic using DAX.
- To understand how to filter data based on statistical benchmarks like the Median.
- To create user-friendly visualizations that highlight significant data spikes.

4. Activities and Tasks :

I completed six major analytical tasks, including:

- **Interaction Analysis:** Categorizing clicks (URL, Profile, Hashtag) for high-word-count tweets.
- **Top Performance Tracking:** Identifying the Top 10 tweets based on a combined score of Likes and Retweets.
- **Correlation Studies:** Using scatter plots to find the relationship between media views and engagement.
- **Trend Monitoring:** Developing dual-axis and line charts to track quarterly and monthly performance growth.

5. Dataset & Transformations :

- **Dataset Used:** tweet.xlsx (Contains columns for impressions, engagements, clicks, and tweet text).
- **Transformations Applied:**
    - **Text Purging:** Created a logic to remove any word containing specific letters (S, H, or C) to meet audit requirements.
    - **Data Parity:** Filtered for Even-numbered impressions and Odd-numbered dates to isolate specific data samples.
    - **Time-Gating:** Applied a "Kill-Switch" logic so visuals only appear during 7 AM–11 AM, 3 PM–5 PM, and 6 PM–11 PM IST.

6. KPIs Measured :

- **Engagement Rate:** (Total Engagements / Total Impressions).
- **Total Interactions:** Sum of URL, Profile, and Hashtag clicks.
- **Performance Score:** Combined metric of Likes + Retweets.
- **Media Efficiency:** Ratio of Media Views to Media Engagements.

7. Skills and Competencies :

- **Data Visualization:** Designing scannable charts with conditional formatting.
- **Logic Building:** Writing DAX formulas for real-time dashboard visibility.
- **Problem Solving:** Handling "forbidden character" constraints using string manipulation.
- **Time Management:** Organizing tasks based on specific shift-based reporting requirements.

8. Challenges and Solutions :

- **Challenge:** Filtering out specific letters while keeping the rest of the tweet readable.
    - **Solution:** Used a multi-step transformation to split text into words, filter the words, and recombine them.

9. Outcomes and Impact :

The final dashboard provides a "smart" reporting environment. By restricting data visibility to specific hours, the report ensures that the right data is viewed by the right shift-workers at the right time, reducing information overload and focusing on high-performing content.

10. Conclusion :

This internship provided me with hands-on experience in the full data lifecycle—from cleaning raw Excel data to deploying a dynamic Power BI report. I successfully demonstrated how technical constraints (like character removal and time-gating) can be turned into functional dashboard features.

11. Feedback and Evidence :

- **Evidence:** The complete Twitter Data Analysis.pbix file and the tweet.xlsx dataset are documented in my GitHub repository.
- **Visual Evidence:** The screenshots are attached in my GitHub repository in dashboard images folder.