Internship Report

Twitter Analytics Dashboard Using Power BI

Introduction

During my internship at NullClass, I had the opportunity to gain hands-on experience in building data-driven solutions. My primary responsibility was to enhance a Power BI dashboard that analyzes Twitter engagement metrics. The objective was to help stakeholders better interpret Twitter data and make more informed decisions based on these insights.

Background

The internship began with a foundational training period, during which I learned the essentials of data cleaning, DAX (Data Analysis Expressions), Power BI visualizations, and effective data storytelling. The subsequent project work allowed me to apply these concepts in a real-world, goal-oriented environment.

Learning Objectives

- Develop and refine advanced Power BI dashboards under practical constraints.
- Gain proficiency in using time-based filters, dynamic visuals, and drill-down features.
- Understand the structure and behavior of Twitter engagement data and how to analyze it meaningfully.

Activities and Tasks

I worked on 10 distinct analytical tasks, each with unique requirements and challenges. Key tasks included:

- Creating a drill-down pie chart to show clicks on tweets with over 500 impressions.
- Implementing a time-sensitive visual that appears only between 3-5 PM IST to analyze engagement during that window.
- Building a ranking chart for the top 10 tweets by combined likes and retweets, with filters for

weekdays and tweet content length.

- Designing scatter and dual-axis charts governed by custom rules such as odd/even dates, presence of media, and word/character-based filters in tweets.

Skills and Competencies Gained

- Power BI (Advanced): Applied complex DAX functions, conditional visibility, dynamic filtering, and interactive visuals.
- Data Cleaning: Transformed raw Twitter data into structured formats suitable for analysis.
- Logical Problem Solving: Devised creative solutions to incorporate specific visual behavior and filtering rules.
- Version Control with GitHub: Used GitHub for uploading `.pbix` files and managing version histories through commits.

Feedback and Evidence

The final version of the dashboard is available on my GitHub repository, showcasing how each visual adapts dynamically to time-based and content-based filters. I ensured full alignment with submission guidelines, including the proper implementation of time-sensitive visuals.

Challenges and Solutions

- Challenge: Power BI doesn't natively support time-based visual rendering (e.g., 3-5 PM IST).

  Solution: I simulated system time using DAX and layered bookmarks to mimic conditional visibility.

- Challenge: Implementing multi-layered filters based on impressions, engagement metrics, dates, and specific tweet content (excluding words/characters).

  Solution: Developed custom DAX measures combining several logic conditions to filter visuals accurately.

Outcomes and Impact

This internship significantly enhanced my technical and analytical capabilities. I am now more

confident in creating interactive, logic-driven dashboards suitable for real business use cases. Additionally, I gained valuable experience in working with social media analytics.

Conclusion

This internship was an excellent opportunity to bridge theory and practice. It taught me how to handle real-world analytical tasks and improve dashboards under varying conditions. The skills I've gained will be valuable in future projects and roles in data analytics.