TWITTER DASHBOARD NULLCLASS PROJECT

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Course: Data Analytics

Company: NullClass

Date: 26th July, 2024

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1. Introduction

1.1 Overview

I am Aviral Singh, a data analyst intern at your esteemed platform, NullClass. This internship aimed to enhance my skills in data visualization and analysis using Power BI, focusing on social media engagement metrics.

1.2 Purpose

The primary goal was to complete a set of tasks involving the creation of various Power BI visualizations and analyses, to gain practical experience and demonstrate my abilities in handling real-world data challenges.

2. Background

2.1 Project Context

During the internship, I was assigned a series of tasks to develop interactive dashboards and visualizations using Power BI. The tasks required analysing social media engagement data to derive meaningful insights.

2.2 Tools and Technologies

- **Power BI:** For creating dashboards and visualizations.
- **DAX:** For creating calculated columns and measures.
- **CSV File:** Data sources provided for the analysis.

3. Learning Objectives

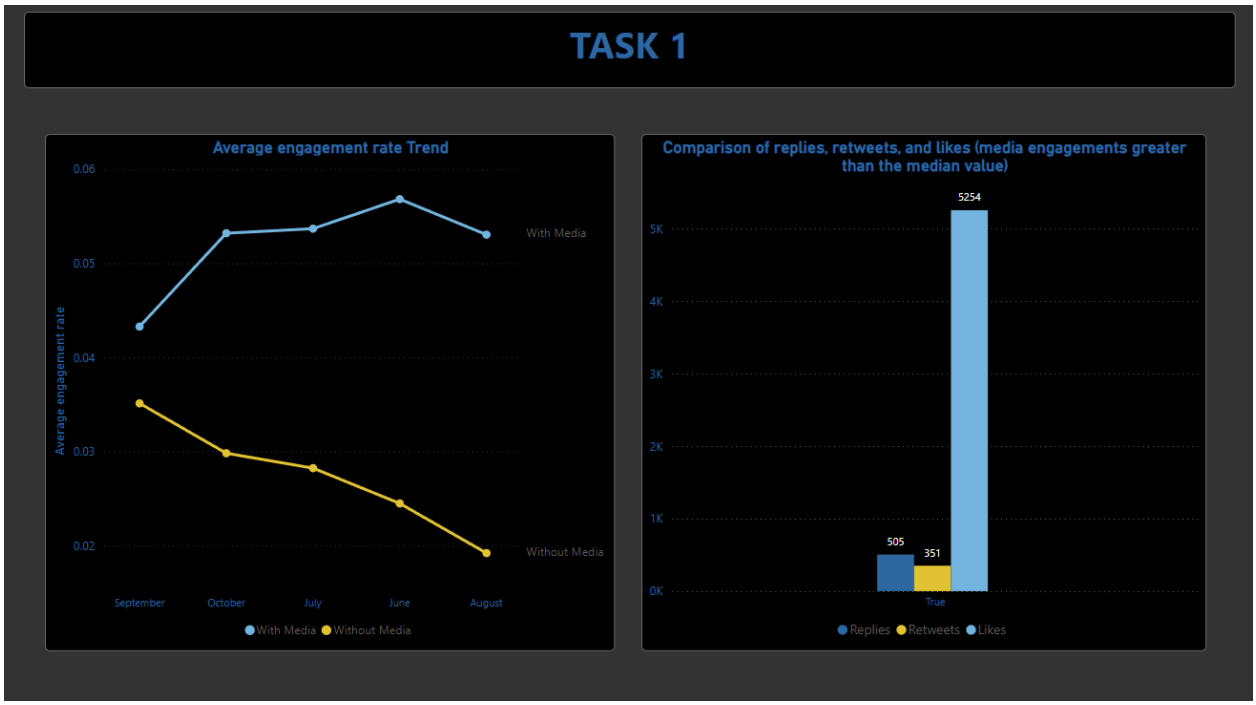
3.1 Objectives

- Develop proficiency in Power BI for creating various types of visualizations.
- Understand and analyse social media engagement metrics.
- Apply DAX formulas for data transformation and analysis.

4. Activities and Tasks

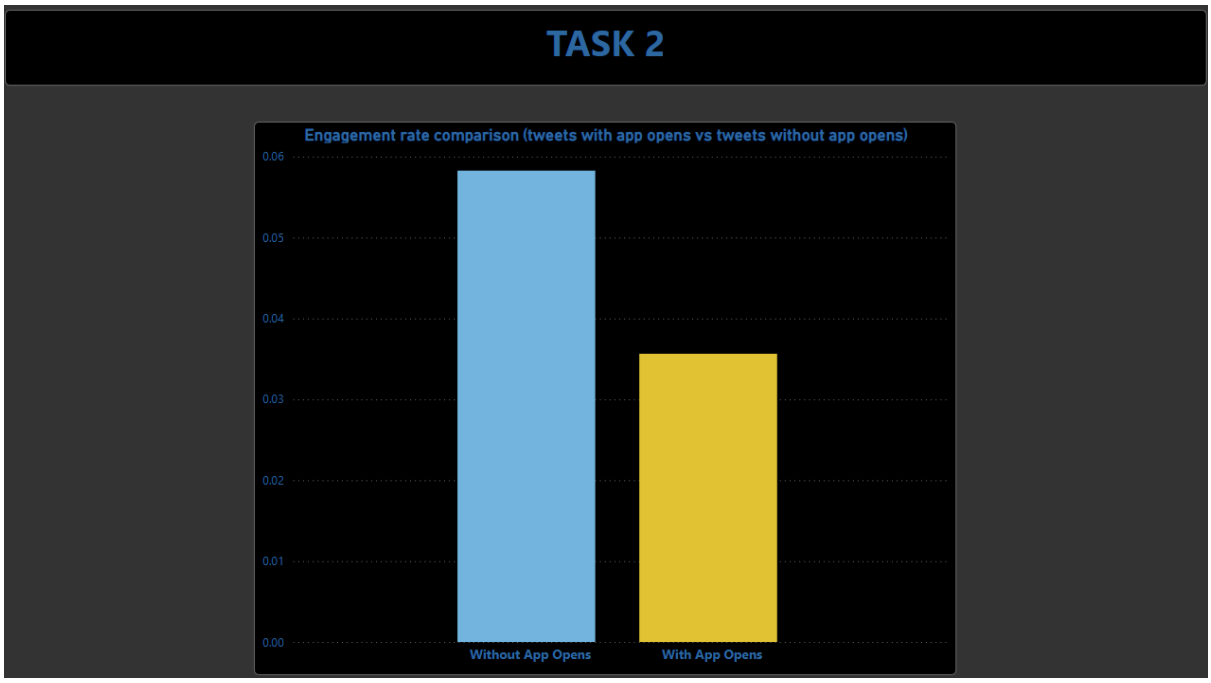
4.1 Task 1: Line Chart and Bar Chart for Engagement Trends

- **Objective:** Create a line chart showing the trend of the average engagement rate over each month of the year. Separate the lines for tweets with media content and those without. Develop a visualization that compares the number of replies, retweets, and likes for tweets that have received media engagements greater than the median value. Include a filter for tweets posted in the last six months.
- **Steps Taken:**
    1. Loaded data into Power BI.
    2. Developed a line chart with separate lines for media and non-media tweets.
    3. Created measures to calculate media engagements greater than the median value.
    4. Developed a bar chart that compares the number of replies, retweets, and likes for tweets that have received media engagements greater than the median value.
- **Visuals:**



4.2 Task 2: Bar Chart for Engagement rate comparison

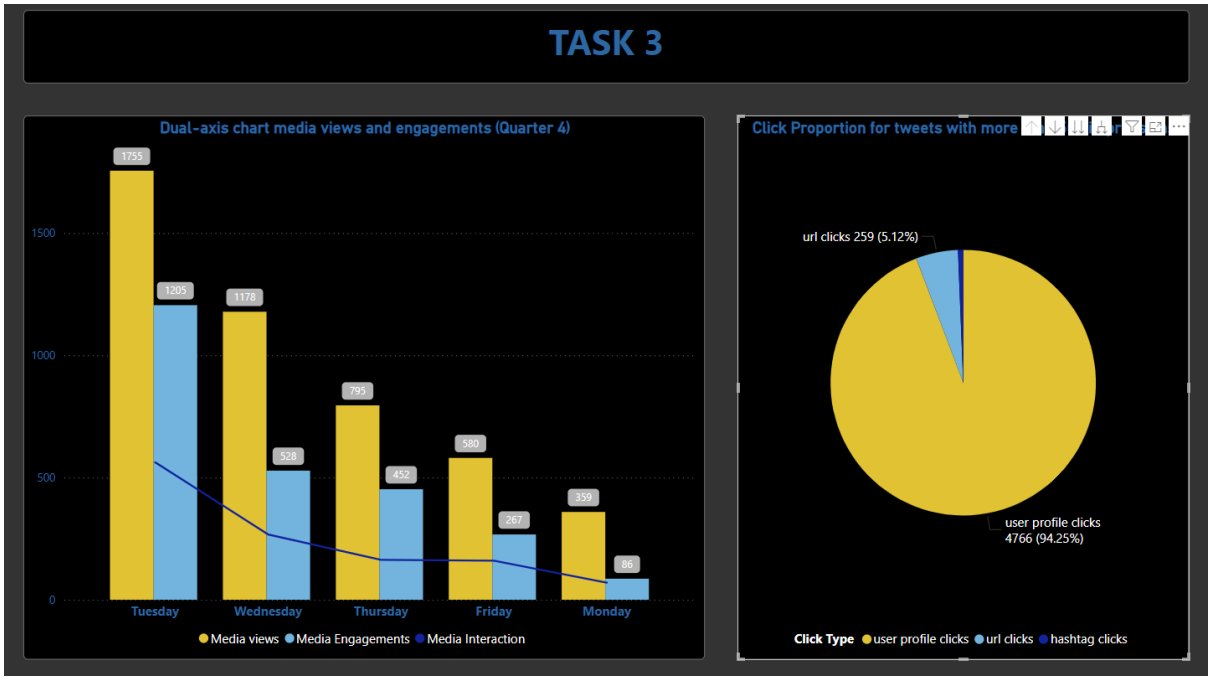
- **Objective:** Analyse tweets to show a comparison of the engagement rate for tweets with app opens versus tweets without app opens. Include only tweets posted between 9 AM and 5 PM on weekdays.
- **Steps Taken:**
    1. Made a new column named AppOpens that shows output as With App Opens if the value of app opens column is more than 0 and vice versa.
    2. Added a measure that only selects weekdays.
    3. Added a column named work hours Include only tweets posted between 9 AM and 5 PM.
    4. Created a bar chart for replies, retweets, and likes, adding the above mentioned 3 points as filters
- **Visuals:**



4.3 Task 3: Dual-Axis Chart for Quarter 4 and Pie Chart for clicks

- **Objective:** Create a dual-axis chart that shows the number of media views and media engagements by the day of the week for the last quarter. Highlight days with significant spikes in media interactions. Build a pie chart that represents the proportion of total clicks (URL clicks, user profile clicks, and hashtag clicks) for tweets with more than 500 impressions. Include a drill-down to view the specific types of clicks for each tweet.
- **Steps Taken:**
    1. Made a new column named quarters that displays the quarter of the date, then added it on the filtered panel and selected 4 to select quarter 4 and deployed it on the Dual-Axis Chart.
    2. Added a new column that says if impression is more than 500 and later used it as a filter and then Created a pie chart for different click types. Added drill-down functionality to view specific click types per tweet.

- **Visuals:**



5. Skills and Competencies

5.1 Skills Developed

- **Power BI Visualization:** Expertise in creating various types of charts and dashboards.
- **DAX Formulas:** Proficiency in using DAX for calculated columns and measures.
- **Data Analysis:** Ability to derive insights from social media engagement metrics.

6. Feedback

- Received positive feedback from peers from the whatsapp group regarding the clarity on doubts.
- Very informative training process

7. Challenges and Solutions

7.1 Challenges

- **Data Quality:** Encountered issues with incomplete data for certain metrics.
- **Solution:** Cleaned and processed data to ensure completeness and accuracy.

7.2 Solutions Implemented

- Used Power BI's data transformation features to handle missing values.
- Validated data integrity before creating visualizations.

8. Outcomes and Impact

8.1 Outcomes

- Successfully created interactive dashboards that provided insights into social media engagement trends.
- Improved skills in data visualization and analysis.

8.2 Impact

- Enhanced understanding of social media metrics and visualization techniques.
- Prepared for future roles in data analysis with practical experience.

9. Conclusion

9.1 Summary

The internship provided valuable experience in working with real-world data and developing visualization solutions using Power BI. The tasks completed have significantly improved my skills and prepared me for future professional challenges.

9.2 Future Goals

- Continue to refine data analysis and visualization skills.
- Apply the knowledge gained to future projects and roles.