

Internship Report: Build Real-Time Twitter Analytics Dashboard - Power BI

1. Introduction

This report comprehensively summarizes my entire internship experience from working on the whole Twitter Analysis project. Throughout the internship, the multiple tasks included using Power BI for visualizing data as well as analyzing Twitter data along with acquiring understandings under mentor guidance.

2. Background

Before the internship started, I finished a training program that had Power BI videos. Through this training, I learned data visualization techniques that were important for my internship tasks.

3. Learning Objectives

- Learn and apply Power BI for data analysis.
- Gain wide-ranging practical experience analyzing social media.
- Real-world datasets are helpful. Problem-solving skills can also be developed by working on them.
- A mentor improves communication and collaboration when interacting.

4. Activities and Tasks

During the internship, I addressed three especially important tasks.

1. Engagement Rate Analysis Chart

- Developed a chart that displays tweets with the highest engagement rates (top 10%).
- Included only tweets with more than 50 likes that were posted on weekdays.
- Ensured the chart is visible only between 3 PM IST to 5 PM IST.
- Filtered tweets to include only those with a character count below 30.

2. Clustered Bar Chart for Click Interactions

- Created a clustered bar chart showing the sum of URL clicks, user profile clicks, and hashtag clicks by tweet category.

- Included only tweets with at least one of these interaction types.
- Ensured the chart is visible only between 3 PM IST to 5 PM IST.
- Filtered tweets by even-numbered tweet dates and word count above 40.

3. **Comparison of Replies, Retweets, and Likes**

- Developed a visualization comparing replies, retweets, and likes for tweets with media engagements above the median value.
- Included only tweets posted between June and August of 2020.
- Ensured visibility only between 3 PM IST to 5 PM IST and 7 AM to 11 AM IST.
- Filtered tweets by odd-numbered tweet dates, even media views, and a character count above 20.
- Removed tweets containing words with the letter 'S'.

I regularly consulted my mentor to clarify doubts and ensure I followed best practices. Working on complex tasks further strengthened my ability to handle challenging problems.

5. Skills and Competencies

- Data visualization with Power BI
- Data preprocessing and cleaning
- Analytical thinking and problem-solving
- Effective communication through mentor interactions

6. Feedback and Evidence

My mentor gave me insightful criticism that improved my ability to think critically and see things. My completed dashboards, reports, and mentor reviews provide as proof of my work.

7. Challenges and Solutions

- **Challenge:** Understanding complex Power BI features
 - *Solution:* Revisited training materials and sought mentor guidance
- **Challenge:** Handling large datasets efficiently
 - *Solution:* Optimized data processing and used Power BI's built-in tools
- **Challenge:** Working on complex tasks that required advanced analytical techniques
 - *Solution:* Broke down problems into smaller steps, researched best practices, and sought mentor support

8. Outcomes and Impact

- Interactive Power BI dashboards that have been produced successfully
- Grew more comfortable working with real-world datasets

- Enhanced capacity for data analysis and problem-solving

9. Conclusion

I learned a lot from this internship and was able to put my theoretical knowledge to use in a real-world situation. It was a worthwhile experience for my professional development since the mentor's direction and well-organized assignments enabled me to improve my abilities.