**Internship Report**

**Name – *Tanishq Homkar***

**Project – *Build Real-Time Twitter Analytics Dashboard - Power BI***

**Introduction**

This report outlines my experience and accomplishments during my internship, focusing on Real-Time Twitter Analytics using Power BI. The internship aimed to develop my analytical and visualization skills while working with real-world Twitter data.

**Background**

The internship was part of the "Build Real-Time Twitter Analytics Dashboard - Power BI" project. The primary objective was to process and visualize Twitter data effectively, applying various data filtering and transformation techniques to derive meaningful insights.

**Learning Objectives**

* Gain proficiency in Power BI for data analysis and visualization.
* Understand data transformation using Power Query and DAX functions.
* Apply filtering, time-based visibility constraints, and advanced analytics to social media data.
* Develop a structured approach to solving real-world data challenges.

**Activities and Tasks**

I successfully completed three key tasks:

* **Task 1:** Created a visual showing the average engagement rate and total impressions for tweets between January 1, 2020, and June 30, 2020. Applied filters for impressions (>100) and likes (=0) while ensuring visibility only between 3 PM - 5 PM IST.
* **Task 2:** Developed a clustered bar chart breaking down URL clicks, user profile clicks, and hashtag clicks by tweet category. Applied additional filters, including tweets posted on even dates and word count >40.
* **Task 3:** Designed a visualization comparing replies, retweets, and likes for tweets with media engagements above the median. Implemented multiple constraints, including time-based visibility, odd tweet dates, even media views, and word filtering.

**Skills and Competencies**

* Data Cleaning and Transformation in Power Query.
* DAX Functions for Data Modeling.
* Creating Dynamic Visuals with Time-Based Constraints.
* Filtering and Segmentation of Social Media Data.
* Dashboard Design and User Experience Considerations.

**Challenges and Solutions**

* **Time Conversion to IST:** Used Power Query to extract time zones and adjust times accordingly.
* **Identifying Tweet Categories:** Derived categories based on user interactions and media views.
* **Ensuring Dynamic Visibility:** Implemented DAX functions to restrict visualization display outside specified time frames.

**Outcomes and Impact**

This internship allowed me to develop a deep understanding of data analysis and visualization using Power BI. I gained hands-on experience with real-world datasets, improving my ability to process and analyze large-scale social media data effectively.

**Conclusion**

The internship provided a valuable learning opportunity, enabling me to refine my technical skills and apply theoretical knowledge to practical scenarios. The structured approach to filtering, transforming, and visualizing data has strengthened my analytical capabilities and prepared me for future projects in data analytics and business intelligence.