Internship Report: Data Analytics & Visualization Using Power BI

# Introduction

This report documents my internship experience as a Data Analyst, focusing on a real- world project involving Twitter analytics using Power BI. The internship provided practical insights into data visualization, business intelligence, and analytical storytelling through dashboard design.

# Background

As a Bsc student in Computer Science at Sies College Of Arts,Science and Commerce, I have cultivated a strong base in programming and problem- solving. This academic foundation equipped me to take on the role of a Data Analyst intern, where I applied my knowledge in real-world settings. During the internship, I worked extensively with Twitter datasets, leveraging Power BI to develop interactive dashboards, implement advanced filters, and perform data-driven analyses.

# Learning Objectives

* + Understand social media metrics and their relevance in data analytics.
  + Learn Power BI functionalities, including DAX, data modeling, and interactive visuals.
  + Apply filters, conditional logic, and business rules to data.
  + Communicate insights through dashboards effectively.

# Activities and Tasks

During my internship, I worked on building a Twitter Analytics Dashboard using Power BI. My main tasks included:

* + Filtering tweets based on time, date, and content conditions
  + Creating different types of charts like bar charts, piechart,clustered bar chart.
  + Comparing engagement rates of tweets with specific features like app opens or media views
  + Applying DAX functions to implement custom logic and conditions
  + Designing visuals that only show up at specific times of the day

These tasks helped me understand how to clean, filter, and visualize data effectively for analysis.

# Skills and Competencies

* + Power BI Dashboard Development
  + Data Analysis Expressions (DAX)
  + Conditional Filtering and Logic
  + Time-based Data Filtering
  + Visual Analytics and Storytelling
  + Data Cleaning and Text Processing

# Feedback and Evidence

The internship supervisor appreciated the accuracy and business relevance of the dashboards. Screenshots of all dashboards and filters, DAX formulas, and visual configurations were submitted as evidence.

# Challenges and Solutions

* + **Challenge**: Applying time-based filters dynamically in Power BI dashboards.
    - **Solution**: Used DAX logic with NOW() and HOUR() functions to implement visibility rules.
  + **Challenge**: Implementing multi-condition filters (like excluding words with specific characters).
    - **Solution**: Used CONTAINSSTRING, NOT, and UPPER DAX functions to detect and exclude tweets based on specific letters.

# Outcomes and Impact

This internship helped me understand the nuances of data filtering and business rules in analytics. I learned to present complex data in interactive, user-friendly formats and discovered how to derive insights that could influence digital marketing strategies.

# Conclusion

The internship offered a rich learning experience that enhanced both my technical and analytical skills. It gave me hands-on exposure to tools and methods that are highly relevant in the data analytics industry. I feel more confident and prepared to take on professional data analysis roles in the future.