

**INTERNSHIP REPORT**



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Description automatically generated**Null class Edtech Private Limited**

Prepared by :

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Role : Data Analyst

Project : Build Real Time Twitter Analytics Dashboard – Power BI

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**Introduction**

I gained an experience as an internship where I got a chance to become a data analyst and worked on building insight and action dashboards through Power BI. One of my tasks was the analysis of tweet performance data for trend or pattern identification that may assist in strategic decisions. The major goal of my internship was to create interactive and dynamic visualisations that were focused on answering specific business requirements. In other words this would require the use of advanced power bi features to filter, model and visualize data based on complex multiple conditions. Further the tasks would have the effects of improving my technical as well as analytical capabilities and also aligned with organizational objectives to optimize data driven strategies. I worked on three major tasks creating a drill-down pie chart with all details in it, implementing a conditional scatter plot and designing a dual-axis chart to indicate engagement trends. Those tasks called for deep mastery of data transformation DAX formulas and visualization techniques all ensuring the dashboards were both accurate and dynamic and adaptable according to the needs of the organization. This report provides a comprehensive overview of the work I did during the internship

**Background**

Data source - The data that my internship used was drawn from social media analytics tools to offer a complete perspective over the performance of the given tweets. It comprised – Impressions - The total number of views a certain tweet received. Clicks - URL clicks, profile click, and hashtag click. Media engagement and media views - These consist of multimedia engagements and views in a single tweet. Replies and engagement rates - These comprise responses created by users and the overall percentages regarding interactions. Tweet attributes word count, tweet dates and timestamps for analysis. Data was formatted by filtering and also visualization by selected criteria making it appropriate for dynamic dashboards as well as complex business questions. Business context analyse the performance of your tweets to optimize your company’s social media strategy inferences from this data, help answer the following questions, improve engagement strategies which would identify the most related content with the audience by targeting campaigns, better optimize timing of content by tracking when the performance trends happen.

**Learning Objectives**

The overall objective of the internship was to bridge theoretical knowledge and practical experience with data analytics focusing on how Power BI could be utilized in deriving actionable insights. Specific learning objectives included the following :

Technical objectives :

Master Power BI : Achieve expertise in using Power BI to model, visualize and report on data learnt advanced features including DAX data analysis expressions, slicers, drill-throughs and conditional formatting to create dynamic and also interactive and creative dashboards.

Data management : Understanding how to connect, transform and clean raw data from different sources including APIs or spreadsheets how to work with large datasets with filtering, sorting and grouping to prepare data for analytical use.

Dynamic visualizations : Creating interactive visualizations such as pie charts, scatter plots and dual-axis graphs that give insight into business using time-based constraints and conditional visibility for advanced filtering.

Analytical objectives :

Trend analysis : Obtain ability to identify patterns and trends in tweet performance metrics like engagement rates and media interactions. Create insights which would be helpful in streamlining the content strategy for optimal engagement.

Problem-solving : Explore how to solve challenging business needs through creative solutions such as including several conditions including filters like word count with a certain time constraint on a dashboard, improve decisions made through converting raw data into actionable insights that specifically answers the business question posed at hand.

Adaptability : Build ability to rapidly learn new tools, techniques and also the methodologies within the constantly evolving field of data analytics. Alignment with my academic and also career goals, the internship provided the opportunity to apply my theory concepts learnt during my MBA to real-world scenarios. It laid a strong foundation for a career in data analytics and business intelligence by equipping me with both technical expertise and a deeper understanding of business data. In summary, the course objectives were to acquire technical skills for Power BI, improve ones analytical skills and also gain professionalism in the field of data.

**Activities and Tasks**

1. 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  
  
2. Plot a scatter chart to analyse the relationship between media engagements and media views for tweets that received more than 10 replies. Highlight tweets with an engagement rate above 5% and this graph should work only between 6PM IST to 11 PM IST apart from that time we should not show this graph in dashboard itself and the tweet date should be odd number as well as tweet word count be above 50.  
  
3. 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. this graph should work only between 3PM IST to 5 PM IST apart from that time we should not show this graph in dashboard itself and the tweet impression should be even number and tweet date should be odd number as well as tweet word count be below 30.

**Skills and Competencies**

In the internship, I acquired a fully comprehensive set of skills and competencies necessary for my role as a data analyst split into technical and soft skills.

Technical skills :

Power BI proficiency : Designed interactive dashboards with the use of advanced features such as DAX for dynamic filters and calculations, drilldowns for detailed exploration and conditional formatting to highlight key metrics. Used slicers and time-based constraints in order to create adaptable user driven dashboards.

Data modelling and transformation : Imported, cleaned and prepared data from multiple sources like spreadsheets APIs using the query editor of Power BI. Designed optimized data models by building relationships and transforming datasets with filtering, grouping and aggregation.

Data visualization : Created pie, scatter and dual-axis visuals to present the insights rich dashboards with tooltips and formatting to provide accessibility and ease of understanding for stakeholders.

Advanced analytical techniques implemented complex conditions such as time-based visibility and calculated measures to satisfy detailed business requirements.

Soft skills :

Problem-solving : Solved intricate challenges including conditional visibility and multi-filter configurations using creative approaches with DAX and slicers.

Communication : Provided clear and visually engaging dashboards tailored to technical and non-technical stakeholder needs.

Adaptability : Acquired the most advanced Power BI features in a very short period and adapted well to changing requirements. This mix of technical and soft skills allowed me to deliver impactful outputs and prepared me for future roles in data analytics.

**Feedback and Evidence**

During my internship at the company I ensured to deliver high quality outputs as per the project requirements and looking forward to feedback that would enhance my performance. The assigned tasks including creating dynamic visualizations in Power BI allowed me to show my technical expertise and problem solving abilities while solving real world business challenges. I hope to receive constructive feedback on my proficiency in using advanced Power BI features including DAX calculations, drill-down functionalities and conditional formatting and my ability to create dynamic dashboards.

One feedback that I would like to provide is having a mentor to help when the candidate gets stuck and is not able to move forward with their task.

**Challenges and Solutions**

Challenge 1 : Complex data requirements

The biggest challenge was to implement conditional visualizations in Power BI like limiting the scatter chart to specific time ranges and meeting multiple conditions such as odd dates and word count limits. It was hard to configure DAX formulas that would manage all these complex criteria while still maintaining dashboard interactivity.

Challenge 2 : Data preparation and cleaning

The data provided had inconsistencies such as missing values, duplicate entries and unstructured formats which impacted the accuracy of analysis.

Solution : I cleaned the data in Power BIs Query Editor, filtered out irrelevant entries, filled missing values and standardized formats. I also created calculated columns to deal with incomplete datasets and to maintain consistency in visualizations. **Outcomes and Impact**

The internship was a great opportunity to apply the skills in data analytics for delivering measurable outcomes that support the organizations goals.

Outcomes :

High-quality dashboards : I designed and implemented dynamic dashboards in Power BI - a pie chart that shows click-through rates url user profile and hashtag on tweets with more than 500 impressions and which helps stakeholders understand the distribution of engagement.

Improved data accuracy : I improved the accuracy and the reliability of the data through thorough data cleaning and transformation so that stakeholders could make informed decisions based on consistent and error-free datasets.

Impact professional growth : This experience greatly strengthened my skill in data visualization and analytical thinking and preparing me for future challenges in data analytics. **Conclusion**

It enriched my experience to apply theoretical knowledge to practical scenarios while developing a comprehensive understanding of data analytics in a professional environment working as an intern data analyst specifically with Power BI involved meaningful tasks that directly contributed to the organizations objectives while enhancing my own skills and competencies throughout the internship. I embarked on challenging assignments requiring critical thinking skills, technical expertise and effective problem-solving. I believe the most important learning from this internship has been the ability to build technical skills in Power BI especially in data modelling, data transformation and building user-friendly visualizations. Through the challenges I learned adaptability, meticulous planning and attention to detail. The experience that I have gained here in this internship has indeed prepared me for a life of working in data analytics. The main point it has given me is that data plays an essential role in decision making and that analytical tools could really make a difference with strategy I am assured that the knowledge and experiences acquired during this internship would contribute to my future professional careers greatly.