

An Internship Report on

Real-Time Project Training on Twitter
Analytics Dashboard

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Under the guidance of :
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Introduction

Social networking sites like Twitter are essential for businesses in the modern digital age to interact with their audience, advertise products, and keep up of industry developments. This internship report offers a succinct synopsis of my in-the-moment project training in Twitter Analytics dashboard development. In order to obtain practical insights, the training concentrated on extracting, analysing, and visualising Twitter data.

Making an interactive dashboard with important information and trends pertaining to Twitter activity was the main goal. I gained experience managing real-time data and creating unique visualisations with Power BI. My practical experience has furnished me with the requisite technical and analytical proficiencies to convert unprocessed data into significant business insights.

Background

Social media has completely changed how companies market their goods and interact with their clientele.

Twitter is unique among these platforms because of its wide user base and real-time nature, which makes it a great tool for businesses to interact with their customers and track trends. To turn the massive amount of data created on Twitter into useful insights, though, advanced analytical methods are needed.

My internship was centred on creating a Twitter Analytics Dashboard because I saw how important data analytics was becoming in the social media space. In order to support businesses in making data-driven decisions, this project was created to give participants practical experience with extracting, processing, and visualising Twitter data.

Learning Objectives

1. Master Data Extraction Techniques:

- Understand methods for cleaning and preprocessing Twitter data to ensure accuracy and relevance.

2. Develop Analytical Skills:

- Learn to apply statistical and analytical techniques to interpret Twitter data.
- Enhance the ability to identify key trends, patterns, and insights from social media metrics.

3. Implement Data Visualization:

- Acquire skills in using Power BI to create interactive and informative dashboards.
- Learn to design custom visualizations that effectively communicate complex data.

4. Improve Problem-Solving Skills:

- Develop strategies to address common obstacles in data analytics projects, such as data quality issues and integration challenges.

5. Develop Communication Skills:

- Learn to present data findings effectively through clear and concise reports and visualizations.
- Enhance ability to explain technical concepts to non-technical audiences.

Activities and Tasks

I had to perform the following tasks during my internship:

- 1) 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.
- 2) 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.
- 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.

4) 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.

Skills and Competencies

During my internship, I developed the following abilities while working on building a twitter analysis dashboard:

1. Data Analysis:

- Comprehensive knowledge of statistical methods and data analysis approaches.
- Proficiency in data transformation, cleaning, and aggregation to get data ready for analysis.

2. Data Visualisation:

- Proficiency in creating dynamic and interactive dashboards with Power BI.
- The ability to create unique visualisations that clearly convey information.

3. Problem-Solving:

- Ability to identify and resolve problems with data quality.
- Capacity to create and execute workflow optimisation solutions for data processing and analysis.

4. Critical Thinking:

- Strong analytical mindset to draw meaningful conclusions from complex datasets.

5. Time Management:

- Capacity to efficiently manage several projects and adhere to project deadlines.
- The ability to prioritise tasks in order to meet project goals on schedule.

6. Strategic Thinking:

- Capacity to match organisational goals and objectives with analytical insights.

Feedback and Evidence

Feedback:

1.Introduction to the Project:

- The Twitter Analytics Dashboard real-time project training was a fantastic learning opportunity that gave me the first-hand experience with data analytics and visualisation tools.
- I was able to learn useful information regarding the nuances of working with social media analytics and real-time data processing.

2. Mentoring and Guidance: -

- Throughout the training session, the mentors offered consistent assistance and were very knowledgeable. The open-door policy made it possible for me to ask questions and get answers quickly, which made the process go more smoothly.

3. Problem-Solving and Practical Application: -

- Working on the Twitter Analytics Dashboard gave me the opportunity to put theoretical ideas to use in a practical setting. It was a priceless experience to combine different tools and technology to make a seamless dashboard.

4. Overall Experience:

- The internship provided a comprehensive learning experience that bridged the gap between academic knowledge and practical application.
- The hands-on training with the Twitter Analytics Dashboard project equipped me with relevant skills and confidence to tackle real-world data analytics challenges.

Evidence of Learning and Achievements

1. Project Documentation:

- Detailed project documentation was maintained, covering all aspects of the project lifecycle, including problem definition, data collection methods, analysis techniques, and visualization strategies.
- The documentation also included the challenges faced and solutions implemented, showcasing our problem-solving abilities.

2. Dashboards and Visualizations:

- I developed interactive dashboard using Power BI, which is accessible online for review. The dashboard provides real-time insights into various Twitter metrics.

Challenges and Solutions

Challenge 1: Noise and Irrelevant Data

- Twitter data contains a significant amount of noise and irrelevant information, such as spam tweets and tweets with missing data, which can skew the analysis.

Solution:

- Data Cleaning: I developed robust data cleaning scripts to filter out spam, advertisements, and irrelevant tweets using predefined criteria.

Challenge 2: Data Visualization

- Creating interactive and meaningful visualizations from the large dataset was challenging, especially in real-time.

Solution:

- Custom Visualizations: I developed custom visualizations tailored to the specific requirements of our analysis, providing clearer and more relevant insights.

Outcomes and Impact

Outcomes:

Development of a Functional Twitter Analytics

Dashboard:

- I successfully designed and implemented a comprehensive Twitter Analytics Dashboard capable of real-time data collection, processing, and visualization.
- The dashboard provides insights into various Twitter metrics such as tweet frequency, sentiment analysis, trending hashtags and user engagement.

Enhanced Technical Skills:

- My proficiency in using Power BI for data analysis and visualization improved significantly.
- I gained hands-on experience with real-time data processing, which involved implementing efficient DAX queries.

Impacts:

Preparedness for Future Roles:

- The internship prepared me for future roles in data analytics and data science by providing a solid foundation in real-time data processing and analysis.
- The skills and knowledge gained during this project will be directly applicable to my future careers, making me a valuable asset to potential employers.

Innovation and Efficiency:

- My work on optimizing data processing and visualization techniques contributed to innovative solutions that improved the efficiency of handling real-time data.
- The methodologies I developed can be applied to other projects, enhancing the organization's capabilities in real-time data analytics.

Conclusion

The Twitter Analytics Dashboard real-time project training was a priceless educational opportunity that combined theory and real-world application. Through this project, I was able to demonstrate my skill with data extraction, processing, and visualisation by creating an analytics dashboard that could provide real-time insights into Twitter stats.

My internship has given me a wealth of knowledge and experience that will be a great asset to my future employment. I am now more equipped to support data analytics initiatives within any organisation, bringing creative thinking and effectiveness to projects involving real-time data processing and visualisation. In addition to helping me advance professionally, this internship has broadened my network, creating new job prospects and encouraging continued professional progress.