Social Media Analytics: F1 racers

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November 10, 2024

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1 Project Outline

The F1 sentiment analysis project aims to gain insights into fan perceptions, emotions, and reactions across the 2024 F1 season through comments made by the audience on YouTube. By analyzing over 100,000 comments scraped from various race-related videos, this project identifies fan sentiment towards racers, races, and teams. With the help of sentiment analysis tools, particularly NRCLex, this project categorizes comments into emotions such as joy, sadness, anger, surprise, and neutral.

The objectives are to reveal how different racers and teams are being perceived throughout the season, identify shifts in fan sentiment after each race, and provide actionable insights for teams, brands, and media stakeholders. Ultimately, this analysis offers a view of audience engagement and sentiment patterns, benefiting F1 management and related sponsors in understanding fan preferences.

2 Team Contributions for iteration 03

2.1 Shivram Nekkanti

- Scrape comments from remaining race videos to ensure dataset completeness.
- Organize scraped data into CSV files, ensuring consistency in columns and format.
- Clean the text data
- Identify and extract relevant comments
- Review and validate all visualizations for accuracy and consistency

2.2 Sanjiv Motilal Choudhari

- Assign racer names to comments by identifying mentions in text using a predefined list of racers (A column in the dataset indicating the racer each comment refers to)
- Apply an NRC and VADER-based sentiment analysis function to each comment to label the emotions.
- Classified emotions for each comment to identify sentiment trends
- Create a line chart showing sentiment trends over time for the top 5 racers.
- Develop a bar chart or stacked bar chart showing emotion distribution for the top 5 racers across the 2024 season.

3 Task distribution for the final iteration

3.1 Shivram Nekkanti

- Create an interactive dashboard in Tableau or Power BI showcasing sentiment trends per race and racer.
- Add comparison charts to visualize emotion trends between the top 5 racers across multiple races.
- Review and validate all visualizations for accuracy and consistency.
- Collaborate to ensure technical accuracy in the final report and presentation.

3.2 Sanjiv Motilal Choudhari

- Draft a detailed technical report summarizing the data collection, processing, and analysis methods.
- Include data insights, interpretation of key visualizations, and limitations in the report.
- Collaborate to design and finalize slides for presenting the dashboard and visuals
- Proofread and format the report and presentation for consistency, clarity, and professionalism.

4 Conclusion

The third iteration of the project has seen substantial progress in data collection, sentiment categorization, and visualization, providing preliminary insights into fan perceptions throughout the 2024 season. By identifying the emotions tied to various racers, races, and teams, we have constructed an in-depth view of fan engagement and sentiment trends.

In the final iteration, we aim to enhance these insights with more sophisticated visualizations in Power BI, a comprehensive technical report detailing our methodology and findings, and an interactive presentation to communicate key insights. Once completed, this project will equip us with valuable information on fan sentiment, helping the F1 teams, sponsors, and management to engage with the audience more effectively and address the emotional highs and lows associated with the races.

Through these insights, stakeholders can foster stronger fan relationships, devise more efficient marketing strategies, and build a supportive fan culture that celebrates the spirit of this sport.

5 Github Repo

The project updates can be seen in the link attached: Social Media Analysis- F1