

CHAPTER 5

CONCLUSION

5.1 Summary

This study has significantly improved techniques for sentiment analysis from social media. By using machine learning efficiency, it tracks trends in public reactions. The study is based on a specific topic and explores the foundational technical architecture, developing it further. The system's model includes data preparation and processing, with powerful open-source tools supporting the implementation of the Support Vector Machine (SVM) algorithm and Term Frequency-Inverse Document Frequency (TF-IDF). The high-performance algorithms enable the study to achieve its goals.

Collecting useful data from social media platforms influences data quality and the subsequent processes. For classification of complex data, careful attention and clarity are required. The election topic involves a mix of different concepts, so to uncover the true objectives, the study identifies data using keywords, trains a model to analyze sentiment, and generates results for each camp. The results are then merged to avoid confusion and incorrect associations in the dataset. Efficient indicators are selected to improve the quality of the report. The model helps organizations understand the real public sentiment and effectively engage with the challenges of the real world.

5.2 Future Works

While this study advances data insight capabilities from social media, there are still limitations that require future work by researchers. As platforms become increasingly resistant to data collection, a stable and efficient method for gathering data is urgently needed. High-quality data is a solid foundation for the analysis model, and the model must offer a universal solution for different social media platforms. This study focuses on X, but Reddit is also a very popular platform in North America. Adjusting data structure and parameters can be cumbersome and affect the stability of the model. Additionally, how to train the model to balance performance and accuracy lacks a clear solution, requiring significant effort on testing.

Analyzing social media platform posts practices data-driven insights into the real world, unlike traditional social media reports. This is a more accurate and promising technical approach. In the future, researchers can expand the goals of this study and break through technical bottlenecks to develop a more user-friendly model as a universal solution. The system could also help organizations quickly perceive the public's emotions about an event, ensuring they respond effectively and promptly.