

# EMPLOYABILITY OF THE ARTIFICIAL INTELLIGENCE LINKED SENTIMENT ANALYSIS IN VARIOUS ECOMMERCE MODELS

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## ABSTRACT

*Understanding customers has become harder with the rise of e-commerce, desires and requirements. One way to better comprehend clients is to investigate their criticism of items and administrations. The powerful sentiment analysis technique can be used to gain insight into customers' thoughts and feelings about goods and services. A "Happy Shopping" application employs sentiment analysis to examine customer feedback regarding goods and services. A summary of the most frequently expressed customer sentiments regarding each product or service will be displayed on the interface. Because of this, customers will be able to rely on the opinions of other customers to make better purchasing decisions. In conclusion, the "Happy Shopping" project aims to use sentiment analysis to improve an e-commerce platform's customer experience. Customers will gain valuable insight into other customers through the projectsentiments about products and services, as well as enhancing services for customer support.*

## INTRODUCTION

The development of e-commerce has altered the way consumers shop for goods and services. Customers can look through millions of goods and services from the convenience of their own homes with just a few clicks. However, there are drawbacks to this convenience as well. Perhaps of the greatest test confronting online business stages is grasping clients; desires and requirements.

To make educated purchasing decisions, customers rely on the feedback of other customers. A Power Survey study found that 97% of buyers read surveys before pursuing a buy choice. The quality of products and services can be better understood through customer feedback, which can help customers make better purchasing decisions. Nonetheless, breaking down clientcriticism can be tedious and work seriously, particularly for huge internet business stages with manyitems and administrations. An effective instrument for automating customer feedback analysis is sentiment analysis. Feeling examination utilizes regular language handling strategies to remove opinions from text information, for example,client surveys and remarks. All customer feedback on the platform, including product reviews, support tickets, and feedback forms, will be subjected to sentiment analysis. By looking at all customer feedback, the "Happy Shopping;" project expects to give a complete perspective on customers' sentiments regarding the platform's products and services. Customers can quickly and easily access the sentiment analysis results for each product or service through a user-friendly interface. A summary of the most frequently expressed sentiments by customers and the sentiment analysis for each product or service will be displayed in the interface. Because of this, customers will be able to rely on the opinions of other customers to make better purchasing decisions. In addition to providing useful customer insights and

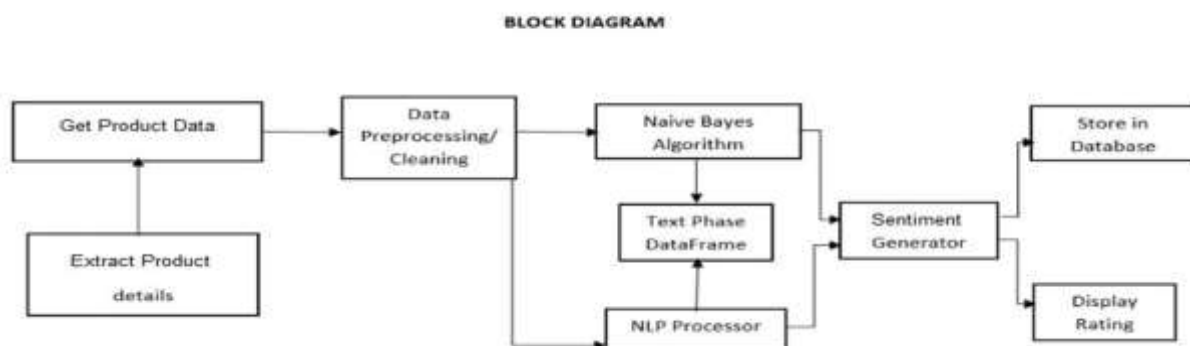
sentiments about goods and services, also known as "Happy Shopping"; the project will also enhance customer support services. Customer support tickets will be analyzed by sentiment analysis to identify improvement areas. For instance, the platform can use this data to improve the quality of its customer support services if customers frequently express dissatisfaction with the service.

## PROBLEM STATEMENT

In recent years, the e-commerce industry has grown dramatically as more and more people shop online for their daily necessities. The developing number of items and administrations on the Internet business stages has made it hard for clients to settle on informed purchasing choices. Customers frequently rely on feedback from other customers to guide their purchasing decisions because there are so many options. Viewing client criticism can be tedious, and work concentrated, particularly for huge web-based business stages. The "Happy Shopping" slogan; Using sentiment analysis to provide customers with useful insights into other customers, the project aims to address this issue; sentiments regarding the platform's products and services. The project aims to provide customers with a more effective and efficient method for analyzing customer feedback, enabling them to make better purchasing decisions. By furnishing clients with important bits of knowledge about different clients; feelings towards items and administrations, opinion examination can assist clients with pursuing more educated purchasing choices.

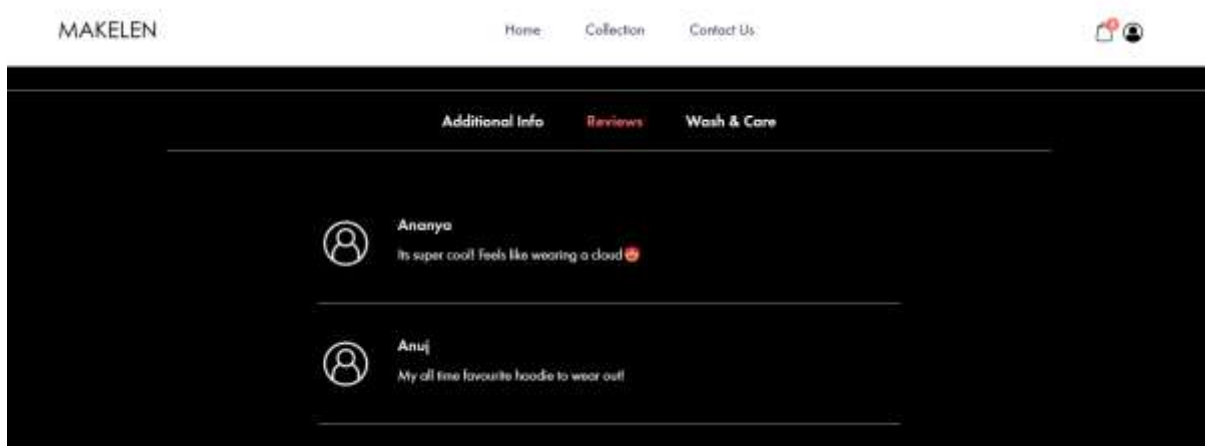
Additionally, sentiment analysis can assist e-commerce platforms in enhancing the quality of their customer support services by analyzing ticket data. At last, by distinguishing designs in client criticism, sentiment analysis can help web-based business stages increment client dedication and maintenance and work on the exactness and importance of their item suggestions.

## PROPOSED SYSTEM FOR HAPPY SHOPPING



Enhancing e-commerce by Using Sentiment Analysis"; is to create software that uses sentiment analysis to improve customers' e-commerce experiences. The application will collect product reviews and customer feedback and use sentiment analysis to determine how people feel about the feedback. Customers will receive product ratings and recommendations based on the sentiment analysis results. The application will likewise permit clients to give input on the suggested items. An administrator dashboard will be given to oversee client information and item data.

## RESULTS AND SYSTEM CONFIGURATION



## CONCLUSIONS

In conclusion, the satisfiability analysis and relevant mathematical models used in the problem statement feasibility assessment showed that the proposed project of using sentiment analysis to improve e-commerce is feasible and can be implemented using cutting-edge algebra and computational methods. Using satisfiability analysis, it was determined that machine learning and natural language processing, among other algorithms and methods, could effectively address the sentiment analysis issue in e-commerce. Additionally, the problem's NP-hard complexity indicates that modern algebraic techniques can effectively solve it. The proposed application of sentiment analysis to enhance e-commerce has significant potential to boost sales and enhance the overall customer experience.

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