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With the drastic increase in internet usage over the past decade, the amount of text data produced has increased exponentially. The number of articles, reviews, and chats from various topics have also increased on the internet. One such important application area is to determine the sentiment of the users using text data analysis.

The project addresses efficient analysis of large volumes of unstructured textual data to gain valuable business insights. The system automates the process of collecting, preprocessing, and analyzing customer reviews to providing NKD stakeholders with a comprehensive understanding of customer perceptions. The implemented methodology combines the web scraping using Python libraries to collect review data from Google and the natural language processing (NLP) techniques. The large language model meta AI (LLaMA) framework is leveraged for sentiment analysis, categorizing reviews as positive, neutral, or negative and generating sentiment scores. A user-friendly and interactive user interface (UI) is developed using Flask framework in Python.

Keywords – Sentiment Analysis, Neural Network, LLAMA, and Web Scraping

