ABSTRACT ON
FLIPKART REVIEW SENTIMENT ANALYSIS

This project presents a comprehensive analysis of customer sentiment on the popular e-commerce platform, Flipkart, through the implementation of a DecisionTree-based Machine Learning model. Customer reviews and ratings are invaluable sources of feedback for online retailers, offering insights into product satisfaction and potential areas for improvement. The primary objective of this project is to automatically classify Flipkart customer reviews into positive, negative, or neutral sentiments, enabling the platform to gain actionable insights from the vast volume of feedback.

For Flipkart review sentiment analysis, common machine learning algorithms include Naive Bayes, which is simple and effective for text classification; Support Vector Machines (SVM), which finds optimal boundaries between sentiment classes; and Logistic Regression, which predicts probabilities for sentiment categories. Decision Trees and Random Forests are used for their interpretability and ensemble learning capabilities. Deep learning models like LSTM and CNN, as well as advanced transformer-based models like BERT, provide high accuracy by capturing complex patterns and contextual information in text.

Common problem statements in Flipkart review sentiment analysis include sentiment classification to determine if reviews are positive, negative, or neutral, and aspect-based sentiment analysis to identify sentiment related to specific product features. Polarity detection focuses on distinguishing positive from negative sentiments, while emotion detection aims to identify specific emotions like joy or anger. Challenges like sarcasm detection and filtering spam reviews also occur, as these can skew analysis results, and handling multi-language reviews adds complexity due to the diverse language usage on the platform.