Title: Hate and offensive Language Detection

Language = Python

Executable Code = code.ipynb

Project Explanation :

Hate and offensive language detection in text data is a critical task in natural language processing (NLP) with significant societal implications. This study investigates the effectiveness of decision tree and Naive Bayes classifiers in identifying hate speech and offensive language. Decision trees offer interpretable rules for classification, while Naive Bayes leverages probabilistic models based on Bayes' theorem. We conduct experiments on labeled datasets, evaluating the performance of both classifiers in terms of accuracy, precision, recall, and F1-score. Furthermore, feature engineering techniques are employed to enhance classification performance. The results demonstrate the efficacy of both decision tree and Naive Bayes classifiers in accurately detecting hate speech and offensive language, with each method presenting distinct advantages. This research contributes to the advancement of hate speech detection techniques and provides insights into the comparative performance of decision tree and Naive Bayes algorithms in addressing this societal challenge.