

ABSTRACT

Sarcasm is a type of linguistic irony that is commonly interpreted by context and tone. The goal of this project is to improve sarcasm detection by incorporating context sensitivity into existing algorithms. We hope to increase the accuracy of recognizing sarcastic utterances by considering the surrounding context, which will have applications in sentiment analysis, social media monitoring, and other areas.

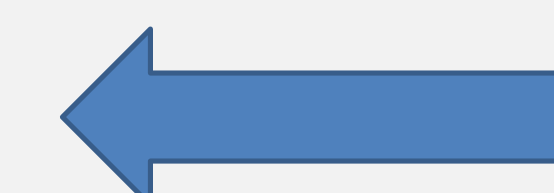
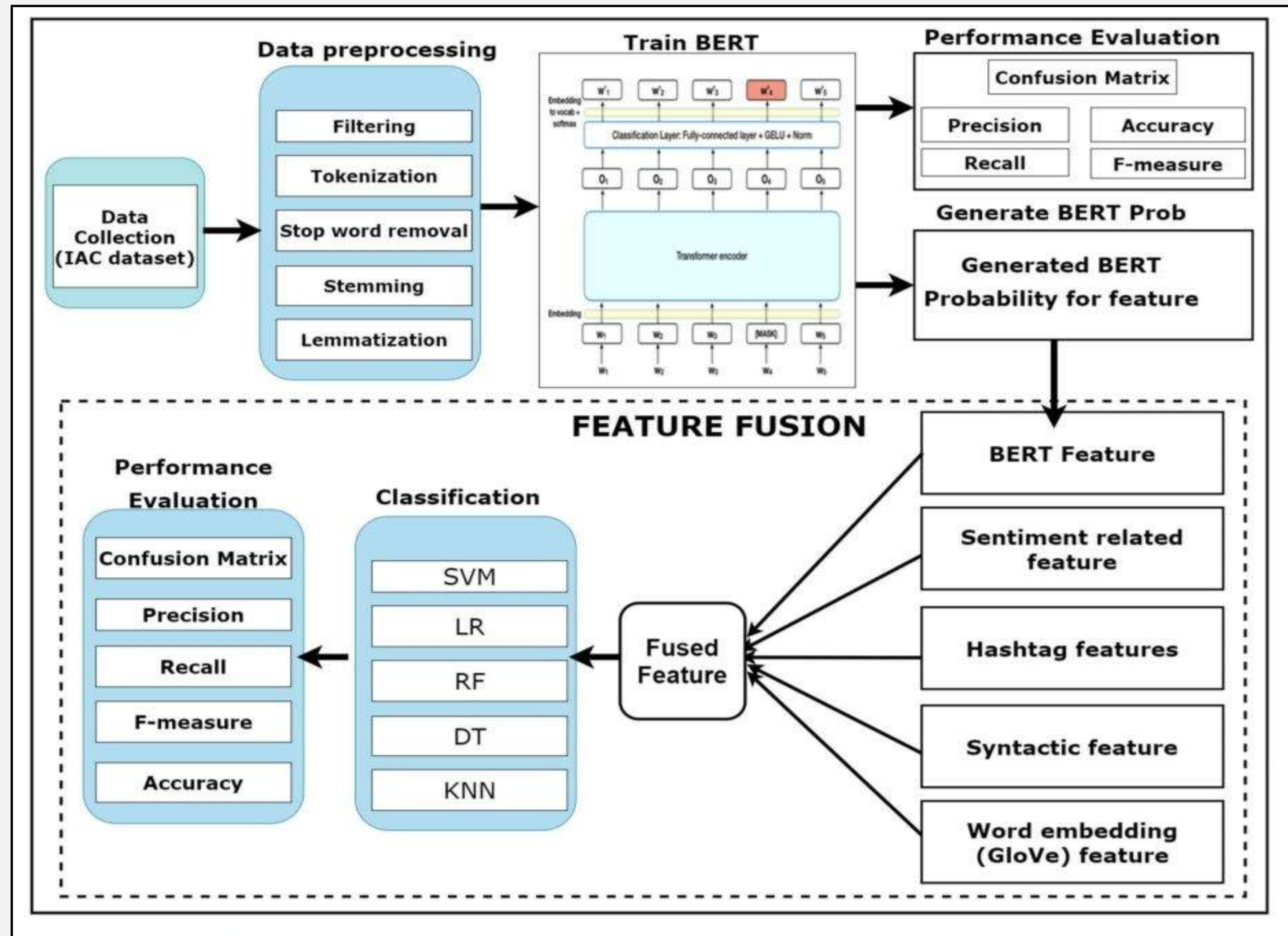
METHODS

The methodology involves a literature review to understand existing sarcasm identification methods and their limitations. Clear objectives are set to comprehend sarcasm as context-based sentiment and propose a BERT feature approach. Diverse datasets, including Twitter benchmarks and IAC-V2, undergo preprocessing. Deep learning models, such as Bi-LSTM with GloVe embeddings and a fine-tuned BERT model, are implemented. A feature fusion model combines BERT features with sentiment-related, syntactic, and GloVe embedding features. Evaluation metrics assess model performance on benchmark datasets, demonstrating the proposed technique's significance.

RESULTS

Our context-sensitive technique demonstrates a significant accuracy boost in sarcasm detection compared to existing models, showcasing a more profound understanding of sarcasm within its contextual framework. Initial error analysis indicates superior performance when sarcasm is embedded in contextual cues, but challenges persist in cases with minimal or ambiguous. The comparison underscores substantial performance gains in our context-sensitive model over traditional approaches, emphasizing the importance of considering contextual information in sarcasm detection.

BERT & Feature Fusion Architecture



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