

**Universiti Teknologi MARA**

**Sentiment Analysis of Public Perception on AI  
Chatbots Using Support Vector Machine (SVM)  
Algorithm**

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## ABSTRACT

This study investigates public sentiment towards AI chatbots, recognizing the critical importance of understanding public perceptions for effective integration. Facing challenges with existing methods, the Support Vector Machine (SVM) algorithm is employed for its proficiency in handling textual data. Analyzing 11,430 tweets through a systematic approach involving literature review, data preprocessing, and feature extraction, the SVM model's high accuracy of 91.27% in categorizing sentiments is showcased. The results provide valuable insights into positive, negative, and neutral perceptions, addressing limitations through strategic adaptations. The research contributes a comprehensive exploration of sentiment analysis, combining technical expertise with societal insights. The SVM-based sentiment analyzer offers a user-friendly tool bridging complex algorithms and practical applications. The study lays the groundwork for future research, suggesting avenues for expanding data resources, exploring advanced models, and enhancing user interfaces. Ultimately, it advances understanding of public sentiments towards AI chatbots, facilitating improved applications and societal integration.

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