

## Development of a Model to Detect the Validity of Indonesian Reviews on E-Commerce Products Using Bert and Smart Approaches

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### **Abstract:**

Ensuring customer satisfaction in e-commerce relies heavily on the accuracy of product reviews. The validity of reviews is critical as accurate and reliable reviews significantly influence consumer decision-making. An effective method to ensure the validity of reviews is through sentiment analysis, specifically on open-ended questions, and comparing them with Likert Scale values. This approach helps in identifying inconsistent or manipulative reviews and provides deeper insights into overall customer satisfaction. This study used BERT and SMART approaches to achieve high accuracy in consumer feedback sentiment analysis. The results showed that IndoBERT, among the various methods, produced the highest accuracy compared to BERT, DistilBERT, ALBERT, and RoBERTa. Notably, combining IndoBERT with SMART achieved the best overall accuracy, outperforming other combinations. Although SMART slightly improved accuracy by around 1%, further research is needed to evaluate the impact on processing time of this approach.

### **Keywords:**

BERT, SMART, Sentiment Analysis, IndoBERT, E-Commerce.