

Real-Time Recognition of the SIBI Alphabet Using the LSTM Method: A Case Study at Kedai Susu Tuli

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ABSTRACT

Indonesian Sign Language System (SIBI) is used as a communication tool for the deaf, but there are still limitations in its understanding in society. This study aims to develop a real-time SIBI alphabet recognition system using the Long Short Term Memory (LSTM) method. The system works by capturing hand movements through a camera, extracting reference points using MediaPipe, and classifying them with a deep learning model. In addition, the system is equipped with a quiz feature to train users' understanding of the SIBI alphabet. Testing was carried out in various lighting conditions to evaluate system performance. The test results showed that the system was able to recognize the alphabet with very good accuracy. A minimum lighting of 120 lux is recommended for the system to work optimally. With this research, it is hoped that the system can continue to be developed to be more accurate and interactive in supporting SIBI alphabet learning.

Keywords: *Gesture Recognition, SIBI Alphabet, LSTM, MediaPipe.*