Intelligent Arabic Sign Language to Arabic text Translation for Easy Deaf Communication

Abstract

This paper presents an intelligent translation system for the signs of some words and letters in the Arabic sign language. The proposed translation system does not depend on any visual markings or gloves used to complete the recognition process. The proposed translation system deals with images, which allows the user to interact with the system in a natural way. The proposed translation system consists of four main phases; Preprocessing images phase, feature extraction phase, matching strategy phase, and Display Text Translation phase. The extracted features used are combining intensity histogram features and Gray Level Co-occurrence Matrix (GLCM) features. Experiments revealed that the proposed system was able to recognize the 19 Arabic alphabets and word with an accuracy of 73%.

References

1. Ameera M.Almasoud and Hend S. Al-Khalifa," A Proposed Semantic Machine Translation System for translating Arabic text to Arabic sign language", Second Kuwait Conf. on E-Services
and E-Systems, April 5-7, 2011, pp 79-84.


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35. Sri`savakon Dangsaart et al, "Intelligent Thai text – Thai sign translation


Index Terms

Computer Science  Communications
Keywords

Deaf, Arabic Sign Language, GLCM, feature extraction, intensity histogram, Classification