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%.

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Index Terms

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