Sign Energy Images for Recognition of Sign Language at Sentence Level

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Abstract

In this paper, the task of sign language recognition at sentence level is addressed. The idea of Sign Energy Image (SEI) and a method of extracting Fuzzy-Gaussian Local Binary Pattern (FzGLBP) features from SEI to characterize the sign are explored. The suitability of interval valued type symbolic data for efficient representation of signs in the knowledgebase is studied. A Chi-square proximity measure is used to establish matching between reference and test signs. A simple nearest neighbor classification technique is used for recognizing signs. Extensive experiments are conducted to study the efficacy of the proposed system. A data base of signs called UoM-ISL is created for experimental analysis.

References


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Index Terms

Computer Science Pattern Recognition

Keywords

Fuzzy Gaussian LBP, Interval valued features, Sign Energy Image, Sign language, Video sequence