

Automation Of The Arabic Sign Language Recognition

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Summary

This paper introduces a system to recognize the Arabic sign language using an instrumented glove and a machine learning method. Interfaces in sign language systems can be categorized as direct-device or vision-based. The direct-device approach uses measurement devices that are in direct contact with the hand such as instrumented gloves, flexion sensors, styli and position-tracking devices. On the other hand, the vision-based approach captures the movement of the signer's hand using a camera that is sometimes aided by making the signer wear a glove that has painted areas indicating the positions of the fingers or knuckles. The proposed system basically consists of a PowerGlove that is connected through the serial port to a workstation running the support vector machine algorithm. Obtained results are promising even though a simple and cheap glove with limited sensors was utilized.

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