Cascaded machine translation systems are essential for Deaf people. Speech recognizers and sign language translators when combined together constitute helpful automatic machine translators. This paper introduces an automatic translator from Arabic spoken language into Arabic sign language. This system aims to integrate Deaf students into classrooms of hearing ones. The proposed system consists of three cascaded modules: a modified Arabic speech recognizer that works using adaptation, an Arabic machine translator, and a developed signing avatar animator. The system is evaluated on real case studies and shows good performance.


Index Terms

Computer Science
Pattern Recognition

Keywords

Arabic Sign Language (ArSL), Deaf students, Example-based translation system, signing avatars