PIP4004 University Project

Review 0

PSCS-69 Indian Sign Language Recognition

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Abstract:

Indian Sign Language (ISL) is vital for communication among the deaf community in India, but a significant gap exists between ISL users and those who rely on spoken language, especially in areas like education, healthcare, and public services. The proposed solution aims to develop an audio-to-ISL conversion technology that uses speech recognition, natural language processing (NLP), and computer vision to bridge this gap. By converting spoken language into ISL gestures in real-time, this system would provide deaf individuals with access to spoken information, promoting inclusivity and seamless communication.

Objective:

1. **Real-time ISL Translation:**
   Develop a system that uses advanced speech recognition and natural language processing to automatically convert spoken language into Indian Sign Language (ISL) gestures in real-time, facilitating effective communication for deaf individuals.
2. **Regional ISL Adaptability:**
   Provide an adaptable solution that considers regional variations of Indian Sign Language, ensuring that the platform can be used by a diverse range of users across different parts of India.
3. **Enhanced Communication Access:**
   Ensure the technology can be applied across critical settings such as education, healthcare, and public services, enabling the deaf community to access spoken information effortlessly.
4. **User-friendly Interface:**
   Design a simple, intuitive interface that caters to both deaf individuals and non-sign language users, making it easy to navigate and utilize the system without requiring specialized skills.