AIML PROJECT ABSTRACT   
  
Abstract: ASL Recognition Using Artificial Intelligence

The American Sign Language (ASL) is a vital mode of communication for those who are deaf or hard of hearing. Still, there exists a huge gap in communication between the users of ASL and non-signers. This project bridges that gap by creating an ASL recognition system based on AI techniques. With advanced techniques in computer vision, machine learning, and deep learning, the system interprets ASL gestures into text or speech in real-time.

The methodology takes into account the utilization of convolutional neural networks in hand gesture recognition as well as facial expression, which is an intrinsic part of ASL. The model is trained with significant amounts of ASL gestures to ensure that the signs are recognized appropriately. Video processing in real time further allows for continuous monitoring and translating ASL gestures into spoken language or written text, thereby making communication easier to non-ASL speakers.

This AI-based system is proposed to be used with a friendly user interface, thus allowing normal users to use their cell phone or webcams to access the application. The project works towards promoting inclusiveness between ASL users and the community at large, seeking better communication. Further development may be taken forward with NLP for contextual understanding, furthering the accuracy of translation for complex sentences and expressions.  
  
  
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