Minor Project(IVth sem)

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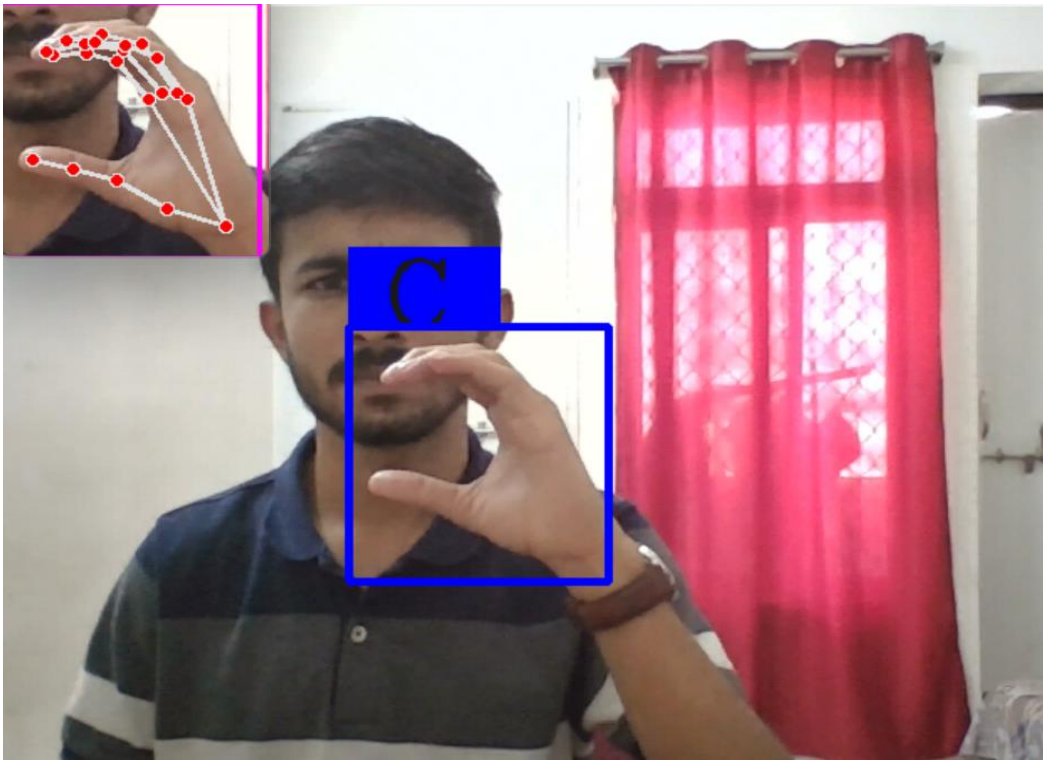
TOPIC-

Sign Language Detection and Website Implementation



ABSTRACT

The objective of this project is to develop a system that can detect American Sign Language (ASL) gestures and display the corresponding text on a website. This project aims to bridge the communication gap between the hearing-impaired or mute or the person who is suffering from both and the rest of society by providing an easy-to-use interface for ASL communication.

The problem addressed in this project is the lack of accessibility for the hearing-impaired population in terms of communication with the rest of society. Many hearing-impaired individuals use ASL as their primary mode of communication, but it is not widely understood or used by the general population. This project aims to provide a solution to this problem by creating a system that can easily translate ASL gestures into text for others to understand.

This project is relevant as it addresses a real-world problem faced by a significant portion of the population. It has the potential to greatly improve the lives of hearing-impaired individuals by making communication with the rest of society easier and more efficient.

OBJECTIVE

- Develop a machine learning model for recognizing sign language gestures
- Implement the model on a website to allow for real-time translation
- Test the system with a group of users to evaluate its effectiveness

IMPLEMENTATION

The implementation of this project will involve the use of machine learning algorithms to train a model to recognize ASL gestures. A website will also be developed as a front-end interface for the system. Users will be able to capture their ASL gestures via a webcam, which will then be processed by the trained model and displayed as text on the website.

RELEVANCE

Making communication with individuals who use sign language more accessible is important for improving inclusivity and accessibility in society. By developing a system that can quickly and accurately translate sign language into text, individuals who use sign language will have greater opportunities to communicate and access information.

PLAN OF ACTION

- Making the dataset
- Train different machine learning models on the dataset
- Evaluate the accuracy of the models and find the best suited model
- Develop the website and integrate the machine learning model
- Test the system with a group of users to evaluate its effectiveness

DELIVERABLES

- A functioning website for sign language detection and translation
- A report documenting the development process and results of user testing
- The trained machine learning model and dataset used for training it.