

# Real Time Modified Sign Language Recognition

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## ABSTRACT

This project aims to develop an innovative software solution for real-time sign language recognition by modifying traditional sign language gestures to impart additional meaning to each movement. The software leverages advanced computer vision and machine learning techniques to enable accurate and swift interpretation of modified sign language gestures,

## OBJECTIVES

- Implement computer vision algorithms to process live video input from a camera.
- Ensure the system can accurately detect and track modified sign language gestures in real-time.
- Establish a standardized set of modifications to create a meaningful and expressive vocabulary.
- Train machine learning models on a diverse dataset of modified sign language gestures.
- Develop a user-friendly customization feature allowing users to define and personalize their modified sign language vocabulary.
- Ensure the system can adapt to individual communication preferences.
- Ensure that the software is accessible to a diverse user base, including individuals with varying degrees of hearing impairments.

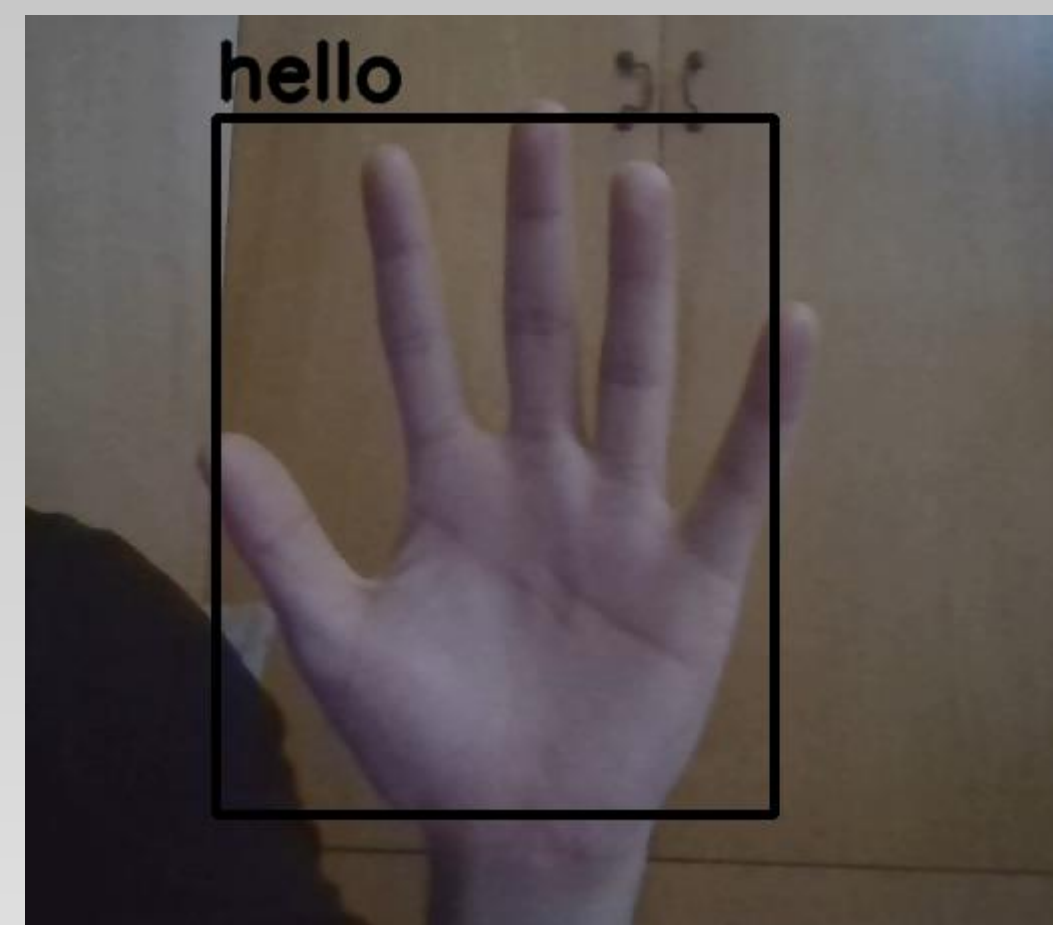


## WORK DONE

We developed a python program that has 4 parts: taking samples, creating a dataset, training the data set and finally the translator.

You can input as many gestures as you want. And how many samples you want for them to increase accuracy.

We also modified and created new simple gestures that are simple and easy to remember to input and test the program.



## CONCLUSION

In conclusion, our new software for recognizing sign language in real-time is a big leap forward for helping people with hearing impairments communicate effectively. By using advanced computer vision and machine learning, we've created a system that not only understands sign language but also gives extra meaning to each gesture.

The software is designed to be easy for everyone to use, with a simple interface and the ability for users to customize their sign language vocabulary. This means it can be adapted for people with different levels of tech experience.

The software doesn't just recognize gestures; it adds a personal touch by letting users modify and personalize their signs. It offers different ways to communicate, like visuals, text, or even speech synthesis, giving users flexibility based on what works best for them.