**ISL TO SPEECH CONVERTER**

**ABSTRACT**

Humans interact with each other to convey their ideas, thoughts, and experiences to people using speech but this is not possible for deaf and mute people. They use sign language for communication but most people are not familiar with sign language. There are existing systems that convert American Sign Language to text and speech. But there is no well-established software that converts Indian Sign Language to speech. Our aim is to build a pragmatic solution using Convolutional Neural Network (CNN) that enables people to understand Indian Sign Languages thereby reducing the communication gap between people. Compared to other gestures (arm, face, head, and body), hand gestures play an important role, as it expresses the user’s views in less time.

Ultimately, a successful ISL-to-speech conversion system requires a combination of technical solutions and human expertise.

**METHODOLOGY**

1. **Creating dataset for training and testing.**

Capturing each frame.

Defining a Region of Interest (ROI).

Applying Gaussian blur.

1. **Using Convolutional Neural Network (CNN) for building a training model.**

Network will learn filters that activate when they see some type of visual feature such as an edge of some orientation or a blotch of some colour.

1. **Creating a GUI to convert signs into text.**

UI shows the captured sign and the recognised symbol. At the same time, it appends the recognised character to a string and converts it into voice after termination of the string.