Sign Language Translation: Computer Vision Approach To Gesture Recognition

# Data Source & Data Link



In Kaggle (Google) Website

# Libraries Required for Project

1. OpenCV (Open Source Computer Vision Library): OpenCV is a popular library for computer vision tasks. You can use it for image and video processing, including gesture recognition for sign language translation.

2. Media Pipe: Developed by Google, Media Pipe offers a framework for building cross-platform applications with machine learning models, including hand tracking and gesture recognition for sign language translation.

3. TensorFlow/Keras: These libraries are commonly used for deep learning tasks. You can train models for sign language recognition using TensorFlow/Keras by leveraging convolutional neural networks (CNNs) or recurrent neural networks (RNNs).

4. PyTorch: Similar to TensorFlow/Keras, PyTorch is another deep learning library that you can use to build models for sign language translation. It provides tools for training neural networks and handling image data.

5. OpenPose: OpenPose is a library for real-time multi-person keypoint detection and pose estimation. It can be used for hand gesture recognition in sign language translation systems.

6. Sign Language MNIST Dataset: This dataset contains grayscale images of sign language gestures corresponding to letters A-Z and digits 0-9. You can use this dataset to train and test your sign language recognition models.

7. Sign Language Recognition using Machine Learning: There are several pre-trained models and tutorials available for sign language recognition using machine learning techniques. You can explore these resources to get started with your project.