	Research Papers	Authors	methodology	Advantages & Disadvantages	Model used	Result
1	"Sign Language Recognition System using Convolutional Neural Network and Computer Vision"	Mohammad Elham Walizad and Mehreen Hurroo	❖ Image capture ❖ Preprocessing ❖ Segmentation ❖ Feature extrcation ❖ Classification with CNN	**Advantages** ❖ Very Accurate ❖ Work fast ❖ Easy yet effective **Disadvantages** ❖ Knows Only a Few Signs ❖ Needs the Right Setting ❖ Might Get Too Specialized	Convolutional Neural Network (CNN)	the development of a system capable of recognizing 10 different ASL gestures with an accuracy of above 90%
2	"Indian Sign Language Recognition Using Neural Networks and KNN Classifiers"	Madhuri Sharma, Ranjna Pal and Ashok Kumar Sahoo	❖ Data collection ❖ Feature extraction ❖ Classification	**Advantages** ❖ High Accuracy ❖ Simplicity in Acquisition ❖ Diverse Techniques **Disadvantages** ❖ Limited Scope ❖ Data Intensive ❖ Potential Overfitting	Neural: Learning KNN Classifier: Simplicity	The system achieved a high level of accuracy (97.10%) in recognizing numeric signs in Indian Sign Language, indicating the project's success in its objective to facilitate communication for the deaf and hard-of-hearing community in public places without the need for an interpreter.
3	"Real-time American Sign Language Recognition with Convolutional Neural Networks"	Sigberto Alarcon Viesca and Brandon Garcia	❖ Utilization of a Pre-trained Model ❖ Transfer Learning ❖ Focusing on Specific Letters	**Advantages** ❖ Leverage Existing Architecture ❖ Efficiency in Training ❖ Robust Initial Results **Disadvantages** ❖ Limited Letter Recognition ❖ Dataset Limitations ❖ Need for More Data	GoogLeNet CNN	The project has developed a promising ASL fingerspelling translator that can accurately recognize the letters a-e with first-time users and letters a-k in a majority of cases. These results, although limited to a portion of the alphabe

4	"Recognition of Indian Sign Language using SVM Classifier"	Dinesh Dattatraya Rankhamb and Prof. S. C. Mhamane	❖ Data collection ❖ Pre processing	**Advantages** ❖ Accessibility ❖ Simplicity of Equipment ❖ Efficient Data Processing **Disadvantages** ❖ Country-Specific Design ❖ Limited Scope ❖ Data Collection Challenges	Principal Component Analysis (PCA)	The main outcome is the development of a proposed system designed to facilitate communication for the deaf and hard of hearing in public places by recognizing numeric signs in Indian sign language, using a straightforward setup involving regular cameras and PCA for image processing.
5	"Indian sign language recognition using machine learning techniques"	A. K. Sahoo	❖ Data Acquisition ❖ Feature Extraction and Selection ❖ Classification	**Advantages** ❖ Accessibility ❖ Simplicity of Equipment ❖ Efficient Feature Extraction ❖ High Classification Accuracy **Disadvantages** ❖ Limited Scope ❖ Potential for Misinterpretation ❖ Dataset Specificity	k-Nearest Neighbour (KNN) and Naive Bayes Classifiers	Creation of a Sign Database High Classification Accuracy with kNN
6	"Deep learning for sign language recognition: Current techniques, benchmarks, and open issues"	Al-Qurishi, M., Khalid, T., & Souissi, R.	❖ Comprehensive Review ❖ Conceptual Classification ❖ Multimodal Analysis	**Advantages** ❖ Multimodal Analysis ❖ Progress Towards Continuous Translation ❖ Encouraging Research Pace	Convolutional Neural Networks (CNNs) for vision-based recognition and Recurrent Neural Networks (RNNs) or Long Short-Term Memory	The study reveals key factors common in sign language recognition research and highlights the advantage of using multiple data sources for better results, but also stresses the need for more development to create widely usable solutions.

				Disadvantages ❖ Lack of Generalization ❖ Complexity in Interpretation	(LSTM) networks	