**NAME : JAITHRA VARMA**
**REG.NO : 200968254**

# DL Project Report:-

## TOPIC - Sign Language Recognition

### Dataset:-

I choose MS-ASL dataset because other datasets do not model real world settings very well as they do not have a high variability in terms of signers, background, etc.. and MS-ASL dataset overcomes these issues.

### About the Dataset:-

This is a real-life large-scale sign language data set comprising over 25,000 annotated videos, which were thoroughly evaluated with state-of-the-art methods from sign and related action recognition. Unlike the current state-of-the-art, the data set allows to investigate the generalization to unseen individuals (signer-independent test) in a realistic setting with over 200 signers. Previous work mostly deals with limited vocabulary tasks, while here, dataset covers a large class count of 1000 signs in challenging and unconstrained real-life recording conditions

### Preprocessing steps required for dataset:-

To construct a dataset with good quality and to avoid class imbalance I took 5 signs classes with the highest frequency. Each class on average contains 55 videos.
Problems faced:

1) The compiled dataset deviated from the original dataset as many video links are no longer valid.
2) Some signers are finishing a sign faster than others.
3) Some videos have repeated signs or have signs of other classes included in it.
4) Longer videos with no signs being performed at the beginning or at the end.

Solution:
I have to manually screen and trim the dataset.

### Objectives:-

To implement several activity recognition architectures on the MS-ASL dataset using transfer learning and to analyze how different activity recognition architectures perform in the task of Sign Language Recognition.