**American Sign Language:**

American Sign Language is implemented from French sign language which was introduced by Thomas Hopins Gallaudet in United States. ASL is similar to French sign language; Individuals who speak American Sign Language are able to effectively communicate in French Sign Language. A variation of American Sign Language also exits. Similarly to English which is international language but it has unique variations between English spoken in England, United States or Australian, there are separate difference that have changed in sign language (Stokoe, 2005).

**Histogram:**

**The main objective of the histogram is to remove unwanted background and noises, leaving only the Region of Interest (ROI), which are the only useful figures in the image. This is achieved via Skin Masking defining the threshold on RGB schema and then converting RGB colour space to grey scale image. Finally Canny Edge technique is employed to identify and detect the presence of sharp discontinuities in an image, thereby detecting the edges of the figure in focus.**

Histogram use to capture and store dataset images. Histogram stored in binary format in which I used pickle library to store histogram. Pickle is used for object serialization and deserialization. Pickling is process whereby python object hierarchy is converted into byte stream and unpickling is inverse operation. Once histogram is created after that I have started create my own dataset for my work which consist A to Z alphabets and 0 to 9 numbers image in gray scal.

**Dataset:**

I initially trained and tested on self-generated dataset of images I took myself. This dataset was a collection of 39 images. In my dataset consist of A to Z alphabet and 0 to 9 numbers where I have used right hand to captured 1200 images for specific alphabet and numbers. After that I implement code which convert flip image to right to left hand image. Each image size is 50 X 50 in gray scale. Additionally, People who want to add their images to this dataset than they can add.

