**Modules**

**1) Creation of Training and Testing Dataset:**

In the data collection phase, different inputs are received from the user and these inputs are saved for future reference. In this module we will create Dataset manually and using resources from Internet. Which will be divided in ratio of 7:3 training to testing.

**2) Training of Machine Learning Model:**

As we are using CNN, we will be using a library named Keras to train the neural network using training dataset to recognize hand gestures.

**3) Capturing the Image**

In this module, we will capture images from user device we will be using OpenCV to do so.

**4) Pre-processing the Image:**

The aim of pre-processing is an improvement of the image data that suppresses unwilling distortions or enhances some image features important for further processing, although geometric transformations of images.

**5) Prediction of Alphabet from the Model:**

Based on the image scanned if the sign is valid (represents an alphabet) then that result will be shown on user inter- face in form of text.

**6) Suggestions and Creation of Sentences:**

Word suggestions will be shown on screen (just like suggestions section on google keyboard) and along with that whole sentence which user want to say through sign language will be shown in form of text.