# Capstone Project

**Project summary**

Recognize American sign language using machine learning models like CNN, GAN and other appropriate models to help deaf and mute communicate without much hardship.

**Objective**

The project is about recognizing/detecting ASL using machine learning algorithms. I would like to help half a million ASL users, mainly children with communicating with non ASL users. The objective of the project is to detect a gesture made by hands and provide an accurate translation of the gesture.

**Data Set**

Multiple data sets are involved with each data set comprising of about 35000 images with 28X28 grey scale pixels. The data type of these images is of .PNG format.

Dataset 1: <http://vlm1.uta.edu/~athitsos/asl_lexicon/>

Dataset 2:<https://www.kaggle.com/datamunge/sign-language-mnist>

Dataset 3:<https://www.kaggle.com/grassknoted/asl-alphabet>

**Data Source**

I have gathered data from University of Texas – Arlington, Kaggle.

**Trouble**

I am having trouble with detecting Alphabet J and Alphabet Z as they involve multiple motions in gesture.