

## Project Design Phase-I

### Solution Architecture

Date	3rd November 2023
Team ID	Team - 591979
Project Name	ASL - Alphabet Image Recognition
Maximum Marks	4 Marks
Team members	Pujyam Sathvika, Rishika Krishna Ch

#### Solution Architecture:

Our problem statement is - **“How might we help deaf individuals communicate with the world in a better way?”**

Our solution architecture uses machine learning to provide image-based classification for the conversion of sign language to text. We are using CNN(Convolutional Neural Networks) for multi class image classification. Our model can accurately predict the 26 letters of the English alphabet, as well as three additional classes for the signs for "space", "delete", and "nothing".

The steps in our solution architecture include:

- Data gathering
- Image preprocessing
- Model building
  - Training the model
  - Testing the model
- Sign language prediction
- Website building
- Integrate sign language CNN model using Flask
- Host the website locally
  - Real time analysis

### Example - Solution Architecture Diagram:

