Project Design Phase-I
Proposed Solution Template

Date	17 October2022
Team ID	PNT2022TMID09787
Project Name	Project – **Real -Time Communication System Powered By AI For Specially Abled**
Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill the following information in proposed solution template.

S.No	Parameter	Description
1.	Problem Statement (Problem to be solved)	**To provide an Efficient communication app which translates the hand signs into text and voice mode for deaf and dumb people**.
2.	Idea / Solution description	**Convolution Neural Networks** are to be used to take hand sign as an input to extract edges, corners. - Dataset is used for training CNN. One dataset for **hand detection** and the other for **gesture detection**. **Voice assistant is implemented** that take input as speech patterns and convert the text into voice.
3.	Novelty / Uniqueness	We have number of symbols to be trained for our project and many of them look similar to each other like the **gesture for symbol 'V' and digit '2'** .To produce better accuracies, **we keep the background of hand a stable single colour**, so that we don't need to segment it on basis of skin colour.
4.	Social Impact / Customer Satisfaction	- AI enables people with disabilities to **lead an independent life with this app**. **Supporting them** in activities of daily living . **It changes the mind set of the disabled, that even they can too be involved in a common conversation like others.**
5.	Business Model (Revenue Model)	- Faster and efficient , the **concerned text or voice as output is produced, the more it leads to optimize the app with new advancements.** - The productivity is gained and at the same time, **leads to improved speed of business**.
6.	Scalability of the Solution	A convolutional neural network can be scaled in three dimensions: *depth, width, resolution*. **Depth** of the network corresponds to the number of layers in a network. **Width** is associated with the number of neurons in a layer. **Resolution** is the image resolution that is being passed to CNN. **Increasing the depth**, by stacking more convolutional layers, allows the network to learn **more complex features**.