

Project Design Phase-I Proposed Solution Template

Date	19 September 2022
Team ID	PNT2022TMID52686
Project Name	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 the proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	<ul style="list-style-type: none">➤ In our society, we have people with disabilities.➤ The technology is developing day by day but no significant developments are undertaken for the betterment of these people.➤ Communication between deaf-mute and a normal person has always been a challenging task.➤ It is very difficult for the mute people to convey their message to normal people. Since normal people are not trained in hand sign language.➤ In emergency times, conveying their message is very difficult.➤ The human hand has remained a popular choice to convey information in situations where other forms like speech cannot be used.➤ Voice Conversion System with Hand Gesture Recognition and translation will be very useful to have a proper conversation between a normal person and an impaired person in any language.

2.	Idea / Solution description	<ul style="list-style-type: none"> ➤ The project aims to develop a system that converts the sign language into a human hearing voice in the desired language to convey a message to normal people, as well as convert speech into understandable sign language for the deaf and dumb. ➤ We are making use of a convolution neural network to create a model that is trained on different hand gestures. An app is built that provides a user Interface for the model.
3.	Novelty / Uniqueness	<ul style="list-style-type: none"> ➤ We make use of Convolution Neural Network to make deaf and dumb people convey their message through hand gestures that convert into human understandable language
4.	Social Impact / Customer Satisfaction	<ul style="list-style-type: none"> ➤ Ease-of-use of the latest technology. ➤ Bridges the communication gap. ➤ Eliminates the target user's mind-set to "fit in". ➤ Improves awareness about sign language. ➤ Companies widen their target audience to include people with different needs. ➤ Removes comprehending related insecurities.
5.	Business Model (Revenue Model)	<ul style="list-style-type: none"> ➤ We are using a flask framework where we can integrate our module with the framework and make an application that can be used for specially abled people. ➤ They can access the application through the app store or play store and use this application by subscription, which is effective and cost efficient.
6.	Scalability of the Solution	<ul style="list-style-type: none"> ➤ For image-recognition problems, convolution neural networks (CNNs) are powerful techniques that offer accuracy. ➤ Our module helps in providing a efficient software development tool that gives a high accuracy and performance on the gesture recognition and converting into human understandable language