

**Project Design Phase-I**  
**Proposed Solution Template**

Date	19 September 2022
Team ID	PNT2022TMID04206
Project Name	Project - Real time communication system powered by AI for specially disabled persons
Maximum Marks	2 Marks

**Proposed Solution Template:**

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	It is important to fix this problem because since everything in our day to day life is becoming/being converted to digital from a physical/analog entity. It is necessary to access information from anywhere. It reduces the hassles of getting knowledge and information that has happened before and will promote everyone to know better about the current events and will motivate everyone to gain profound knowledge in their interests.
2.	Idea / Solution description	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 which uses this model. This app enables deaf and dumb people to convey their information using signs which get converted to human-understandable language and speech is given as output.
3.	Novelty / Uniqueness	This paper also introduces new potential FPGA-based applications such as low cost real time simulator for power system by <b>Artificial Intelligence</b> .
4.	Social Impact / Customer Satisfaction	ATDs (Assisting Technology Devices) help a person to hear and understand what is being said more easily. The customers satisfaction of ATDs is critical for independence and participation in society of individuals with disabilities.

5.	Business Model (Revenue Model)	Out of 3.9 billion users of mobile devices globally in which 5 percent are deaf people, 51% access the internet through their smartphones only. 89% of the total time spent on their smartphones, people play games and use messaging and shopping apps. Integrating in-app advertising into the app revenue model means that the developer will get paid for serving ads within the app. To do that, a developer has to partner with an ad monetization platform and integrate their SDK (Software Development Kit) which is a piece of code that should be properly added to your app code.
6.	Scalability of the Solution	All the deaf and dumb people cannot communicate with normal person so they have to depend on some sort of visual communication. Gesture shows an expressive movement of body parts such as physical movements of head, face, arms, hand or body which convey some message.