Project Design Phase-I
Proposed Solution Template

Date	15 October 2022
Team ID	PNT2022TMID27182
Project Name	Real – Time Communication System Powered by AI for Specially Abled

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)	This programme can facilitate communication between those who have special needs and those who do not, as well as the other way around.
2.	Idea / Solution description	By employing AI technology to import the relevant libraries into the Python code, these problems can be fixed. This research presents a prototype assistive system for Deaf-mute people to bridge the communication gap with hearing people. With the help of this tool, a person can communicate through hand gestures to recognise a variety of gesture-based signs. The controller for this assistive system was developed to analyse gesture images using a range of image processing methods and deep learning models to recognise the sign. This sign is converted into voice in real time using a text-to-speech module.
3.	Novelty / Uniqueness	This project was developed to address the need to translate a variety of modalities, such as images into Natural Language (NL) text, into a language that deaf and blind people can understand and communicate in. The prototype created as a result of this research includes cameras attached to dark-colored spectacles, along with a travel-sized computer, speaker, and microphone. However, all of the technologies we looked into up until this point were only focused on one parameter or degree of disability among the three: blindness, deafness, and dumbness. We have since discovered a variety of technologies that can help people with disabilities communicate more easily among themselves and with the rest of society. There is currently no technology that is sufficiently developed to act as a general solution to any of these three constraints.

		Therefore, in order to accomplish this, we propose a generic strategy that anyone with a combination of these three disabilities might use to picture oneself as a part of this magnificent setting.
4.	Social Impact / Customer Satisfaction	Due to society's poor command of ASL and lack of awareness of the Deaf community, Deaf individuals face challenges in many facets of everyday life, including employment, higher education, healthcare, mental health services, emergency preparedness, technology, and government benefits. The development of expressive and receptive communication skills (speech and language) is hampered. Academic achievement is lowered by language-related learning difficulties. Communication issues usually lead to social isolation and a poor self-image.
5.	Business Model (Revenue Model)	A business must continuously keep its clients in mind in an environment where the pace is accelerating if it wants to keep their satisfaction and, consequently, their loyalty. Offering ICT-based services to people with intellectual disabilities is the case company's main focus. The case firm has concluded that in order to maintain and grow its revenue, it is essential to improve the customer experience because it has already greatly increased its market share and expanded its operations in its primary client categories. The challenge the company is now facing is to develop a business plan and continue offering customers satisfactory service in order to maintain and boost the company's returns.
6.	Scalability of the Solution	This is typically accepted in the Deaf community, but hearing people might not comprehend it. Directness in communication is regarded to be one aspect of the Deaf culture. Two more indications for communication are touch and physical proximity.