

## Project Design Phase-I Proposed Solution Template

<b>Date</b>	<b>2nd November 2023</b>
<b>Team ID</b>	<b>Team - 591979</b>
<b>Project Name</b>	<b>ASL - Alphabet Image Recognition</b>
<b>Maximum Marks</b>	<b>2 Marks</b>
<b>Team members</b>	<b>Pujyam Sathvika, Rishika Krishna Ch</b>

### Proposed Solution:

<b>S.No.</b>	<b>Parameter</b>	<b>Description</b>
1.	Problem Statement (Problem to be solved)	Limited accessibility to American Sign Language (ASL) resources and education hinders effective communication for the deaf community. Our project aims to solve these challenges by implementing an ASL recognition system based on convolution neural networks (CNNs) to improve ASL accessibility and for better communication.
2.	Idea / Solution description	Our solution involves the development of an ASL recognition system based on CNN. This model will facilitate ASL sign language recognition, benefiting deaf individuals by providing a tool for effective communication. This model will serve as a foundation for various other applications thus enhancing ASL accessibility.
3.	Novelty / Uniqueness	Our solution uses machine learning algorithms to solve real world need to bridge the gap between people who use sign language and those who do not. Our solution has the versatility to be included into various software and hardware devices in the future. Our solution widely impacts the accessibility for those in need.
4.	Social Impact / Customer Satisfaction	Social impact of ASL is significant , as it contributes to effective communication, inclusivity and a more understanding community for the deaf people. It plays an

		important role in the lives of Deaf individuals and has a broader influence on the way society perceives and interacts with the Deaf community.
5.	Business Model (Revenue Model)	<p>The business will revolve around developing an accurate machine learning model. This model can enter a growing market for accessibility solutions. Companies can develop software and hardware products that cater to the needs of deaf. A Pay-Per-Use model can be developed as follows:</p> <ul style="list-style-type: none"> <li>• Charge users on a per-translation basis, allowing them to pay for the specific translations they need. This model is suitable for occasional users or businesses that require sign language translation for specific purposes.</li> </ul>
6.	Scalability of the Solution	Our solution involves classification of the hand gestures into alphabets. This solution, once accurately developed can be incorporated into various mobile applications(which can convert text to sign language and vice versa), into IOT smart devices. This solution can further be included into the education system for the deaf.