

Problem-Solution fit

Define CS, fit into CC	1. CUSTOMER SEGMENT(S) CS The main customer for our project are: 1. People who wants to communicate with deaf and mute people. 2. Deaf and mute individuals who desire to communicate with others.	6. CUSTOMER CONSTRAINTS CC Not everyone understands the sign language. Hence, it becomes difficult for the disabled to communicate in day-to-day life. Sign language is the only tool of communication for the person who is not able to speak and hear anything. Sign language is a boon for the physically challenged people to express their thoughts and emotions.	5. AVAILABLE SOLUTIONS AS The existing system for sign language recognition involves the use of glove sensors. It is used for obtaining the input for recognizing the signs given by the user. Sensor gloves refer to the gloves that have multiple sensors embedded in them. These track the location and motion of the fingers and the palm. The major disadvantage of the existing system is the complexity of using sensors for gesture recognition. The user is expected to be wearing the gloves each time he wants to give an input and it is quite expensive and difficult to use.	Explore AS, differentiate
Focus on J&P, tap into BE, understand RC	2. JOBS-TO-BE-DONE / PROBLEMS J&P 1. Communication during the time of emergencies. 2. Everybody cannot afford to have human translators of sign language and they may not be available all the time. 3. People who engage in conversation with deaf and mute people will find it hard and tedious. 4. Deaf and mute people may lose a lot of opportunities because they cannot speak or express their thoughts verbally in situations like an interview.	9. PROBLEM ROOT CAUSE RC Currently, the technological advancements pull everyone into the digital lifestyle. Thus, giving rise to the problem of communication through the internet, for the deaf and mute people, who are familiar only with the sign language they know. Here comes the necessity to build a sign language recognition system, through which the computer can be made to recognize and interpret sign language and translate it for the required task.	7. BEHAVIOUR BE Directly related : D-Talk, sign language, message conversion, hand gesture, mental damage, difficulty to communicate. Indirectly associated : Empowered technology, completely paralyzed, noble cause, using sensors in day to day life, environmental threats affect their life difficulty in society.	Focus on J&P, tap into BE, understand RC
Identify strong TR & EM	3. TRIGGERS TR Deaf and mute people can easily fall into depression as they cannot easily express their feelings. Also, their family members go through a lot of stress in order to understand them. 4. EMOTIONS: EM Before: Insecurity, Lack of Confidence, Dependent After: Secured, Confidence, Independent	10. YOUR SOLUTION SL People with disabilities stand to benefit significantly from AI-powered solutions, which will help them with daily tasks and provide them the chance to learn new skills. 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 mute.	8. CHANNELS of BEHAVIOUR CH 8.1 ONLINE Giving them specialised equipment to supplement educational programmes would help them become more mentally and emotionally healthy. 8.2 OFFLINE Their lives are mostly impacted by entering our direct society, which includes schools, colleges, and workplaces.	Extract online & offline CH of BE