Innohacks2.0

Hack n' Innovate

Theme :

[HEALTH CARE]

Team Name and Members Details

REVIVERS2.0

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Problem Statement

Deaf and mute people face several difficulties when it comes to communicating with computers. Here are some of the most common challenges:

1. **Lack of audio feedback**: Deaf individuals cannot hear audio feedback from the computer, such as system sounds, music, or voice prompts. This can make it difficult to interact with certain applications or to confirm that a task has been completed.
2. **Limited speech recognition**: Some deaf and mute individuals may use speech recognition software to communicate with their computer. However, this technology can be unreliable and may not work well for individuals with speech impairments or heavy accents.
3. **Limited access to video content**: Many online videos and multimedia content rely on audio cues, making them difficult for deaf individuals to understand. While some videos may have closed captions, not all content creators provide them.
4. **Limited access to voice assistants**: Voice assistants such as Siri or Alexa rely on spoken commands, making them difficult for deaf individuals to use. While some devices have visual feedback or sign language recognition, these features are not always available or accessible.
5. **Limited access to sign language interpreters**: Some deaf individuals may require sign language nterpreters to communicate with others, but finding and coordinating with interpreters can be challenging, especially in remote or online settings.

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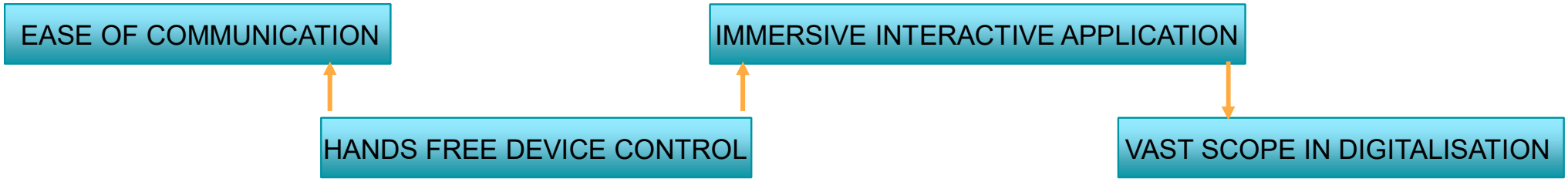
Proposed Solution

- Handisys is a mobile application which helps connecting physically challenged people with muteness, deafness and blindness.
- As for common folks, the app provides a platform to go hands free and configure the device from a distance.
- There are existing technologies but those are not cost efficient but ours is.Physically challenged people face a lot of problems in day to day life to communicate with each other.
- It is using sign language and converting it to text and audio.
- And for normal use case, in the time of coding when we can't use our hands to touch we could have used it and in future we can.
- In the era of digitalisation it will help in hands free banking,driving and instructing which will make everything easy.

Use Case



EASE OF COMMUNICATION

- This Application designed for differently abled people often focus on providing ease of communication through visual cues and real-time translation services.
- These apps aim to bridge the communication gap between deaf and hearing individuals by providing a platform for communication that accommodates the unique needs of the deaf community.
- One of the key features of app for deaf people is real-time captioning. This allows for live conversations to be transcribed in real-time.

HANDS FREE DEVICE CONTROL

- Hands-free device control refers to the ability to operate electronic devices without the use of hands.
- Our application use ***Motion detection technology in hands-free device control***. This technology allows users to control their devices by making hand gestures or moving their head. This technology is often used in gaming consoles.
- It can also be used in other contexts, such as in the automotive industry, where drivers can control certain functions of their vehicles using hand gestures.

IMMERSIVE INTERACTIVE LEARNING

- An immersive interactive application is a type of software application that provides users with a highly engaging and interactive experience.
- These applications typically use to create an environment where users can interact with digital objects and characters in a more natural and intuitive way.
- Our application this feature can be used in various games along side with the help of differently abled people in every possible way

VAST SCOPE OF DIGITALISATION

- The use of hands-free technology has become increasingly important in digitalisation.
- In manufacturing, hands-free technology is being used to improve efficiency and safety. For example, workers can use this app to receive real-time instructions and guidance while working on complex machinery, reducing the risk of errors and accidents.
- This application can be used in ATM machine for commanding.
- It can also be used in industry machines which are sensitive of touch and can be used and operated using gestures.

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Details about our approach

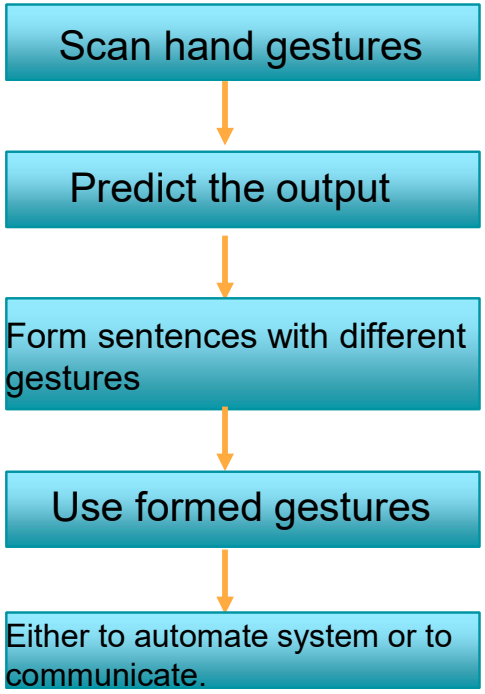
✴This app uses image processing in real time .

✴Our model predicts the gestures of hands.

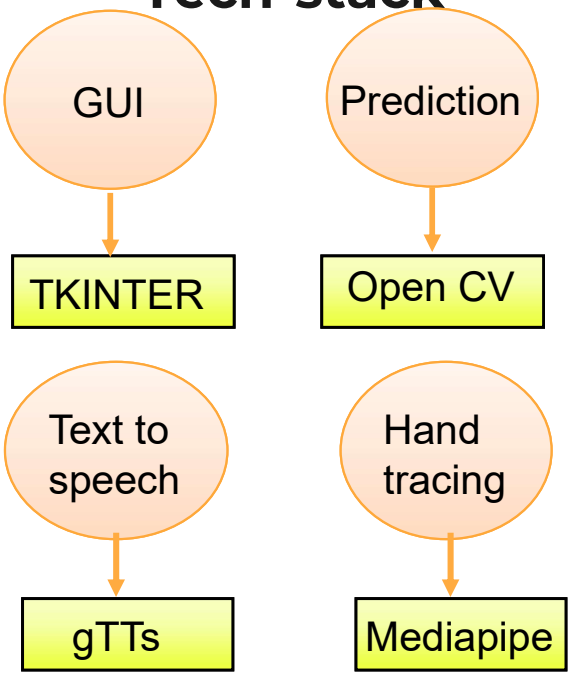
✴Form meaningful sentences of user desire.

✴This output is voiced by an AI and the process can also go vice versa.

Flow of development



Tech-stack



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USP

Unique points

We are replacing human mediator with the complete automated softwares.

We have replaced additional devices like ARDUINO,ultrasonic sensors with Handisys

GUI is simple and interactive , anyone can use it without any major prior tech knowledge.

Selling points

Anyone can use it with their personal computers , no need to go anywhere that's why it is cost effective

The sensors used in existing technology costs Rs.1379 but our application do not require any sensors like this.

Scalability of Solution