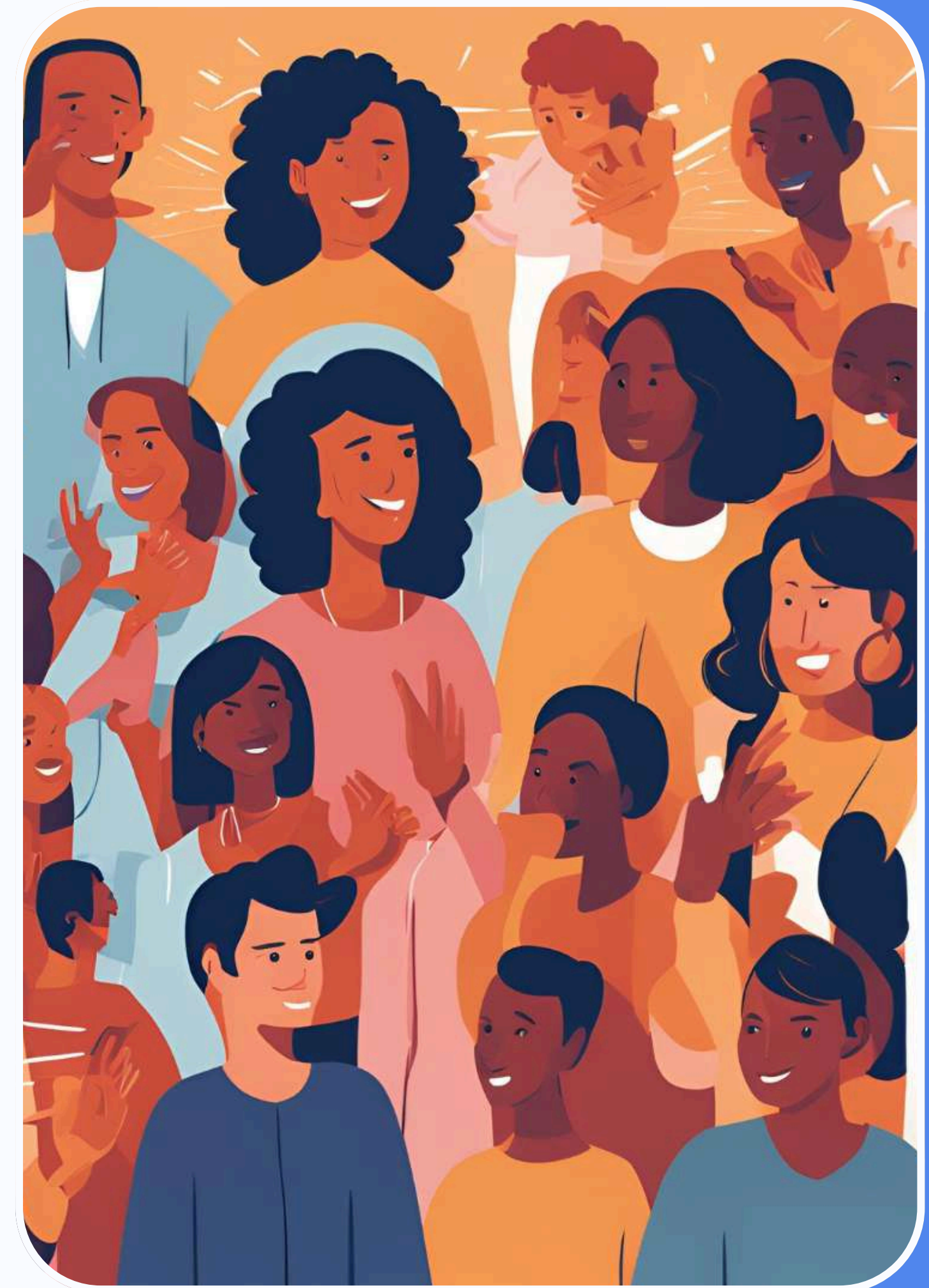**Problem
Smashers**

Problem Statement

In a hearing-centric world, deaf and mute individuals face social and economic exclusion due to the limited accessibility and understanding of sign language, despite its expressive power

Types of problems

- Social
  - Public Places
    - Bank
    - Public Transport Depots
    - Food Outlets
- Economical
  - Workplaces
    - Inequality in opportunities
    - Hiring bias

Problem Smashers
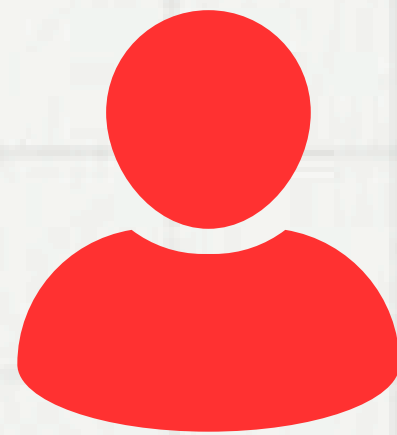
Our Solution

✴ **Our Assistive Technology**

An AI system converts sign language to text or speech and vice versa, allowing for real-time communication and inclusivity. This advanced methodology and computer vision provide a scalable solution to bridge communication gaps effectively.
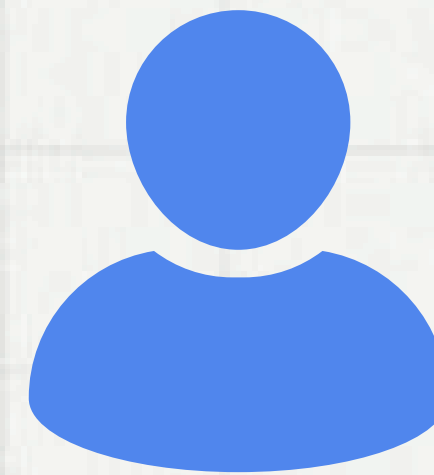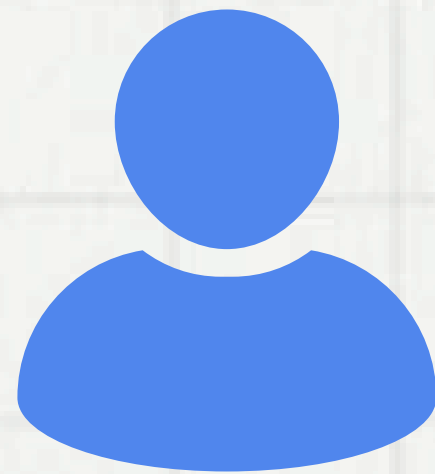
Technical Features

1) Sign Language Conversion :
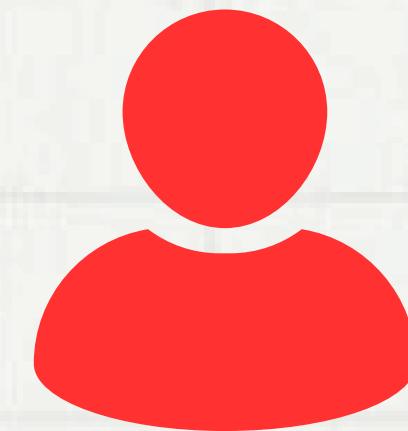
Sign language to text

Non-Verbal

- Enabling Sign Language to text conversion
- Text is then converted regional languages if needed and then read aloud

Technical Features

2) Deafness Assistance :

Voice to text read aloud

Deaf

- When the sender is deaf, need for assistance is eliminated
- Assistance is needed only when the receiver is deaf

TECHNOLOGIES USED :

API
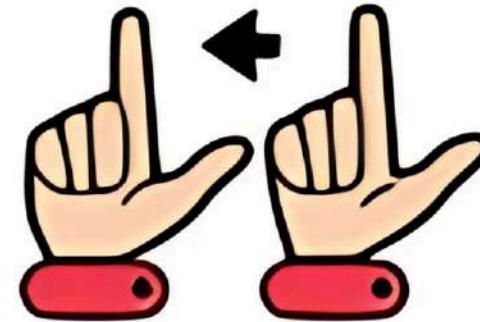
Google translate API

OTHER TECH

Read aloud technology
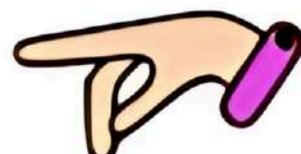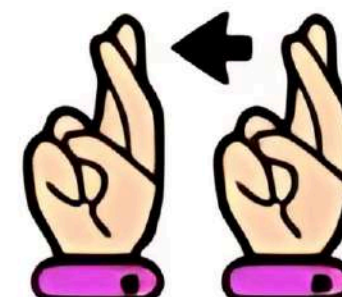
a b c ch d e f

g h i j k l ll

m n ñ o p q r rr

s t u v w x y z

Deaf and Non-Verbal people
10%

Verbal communicating people
90%

EMPLOYMENT BY EDUCATION LEVEL

HEARING PEOPLE

DEAF PEOPLE

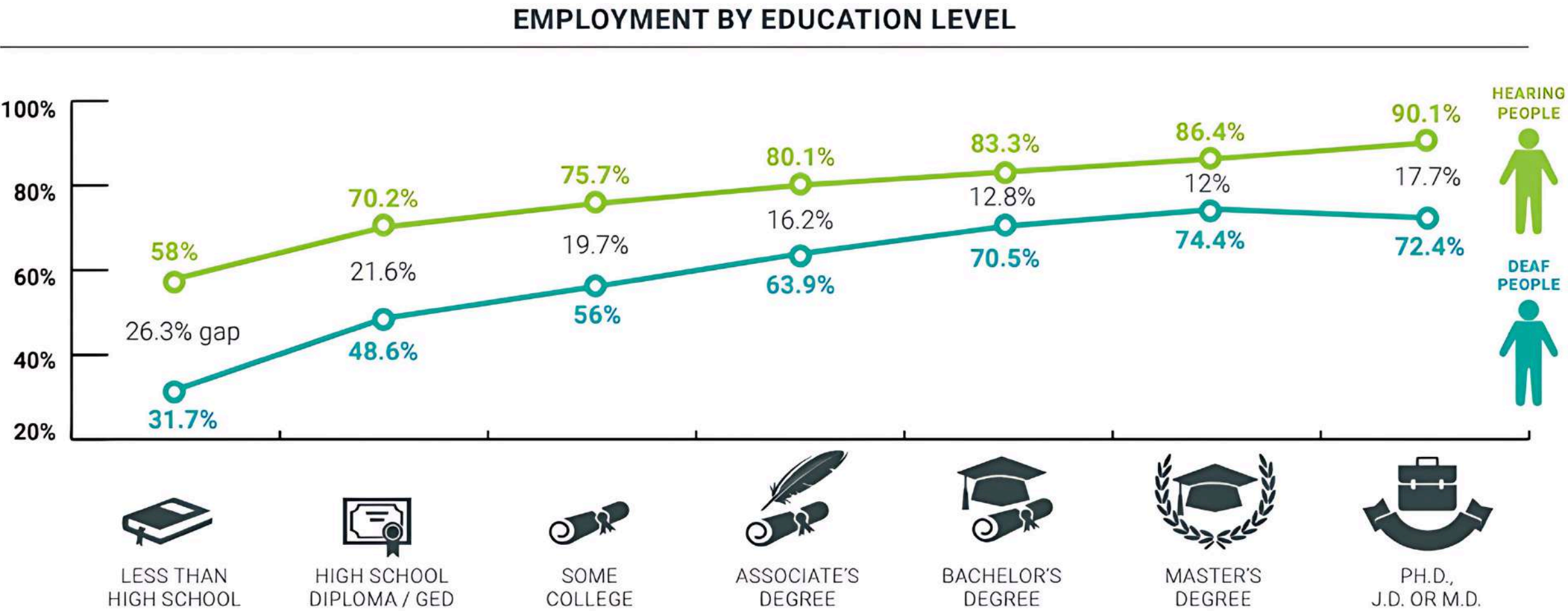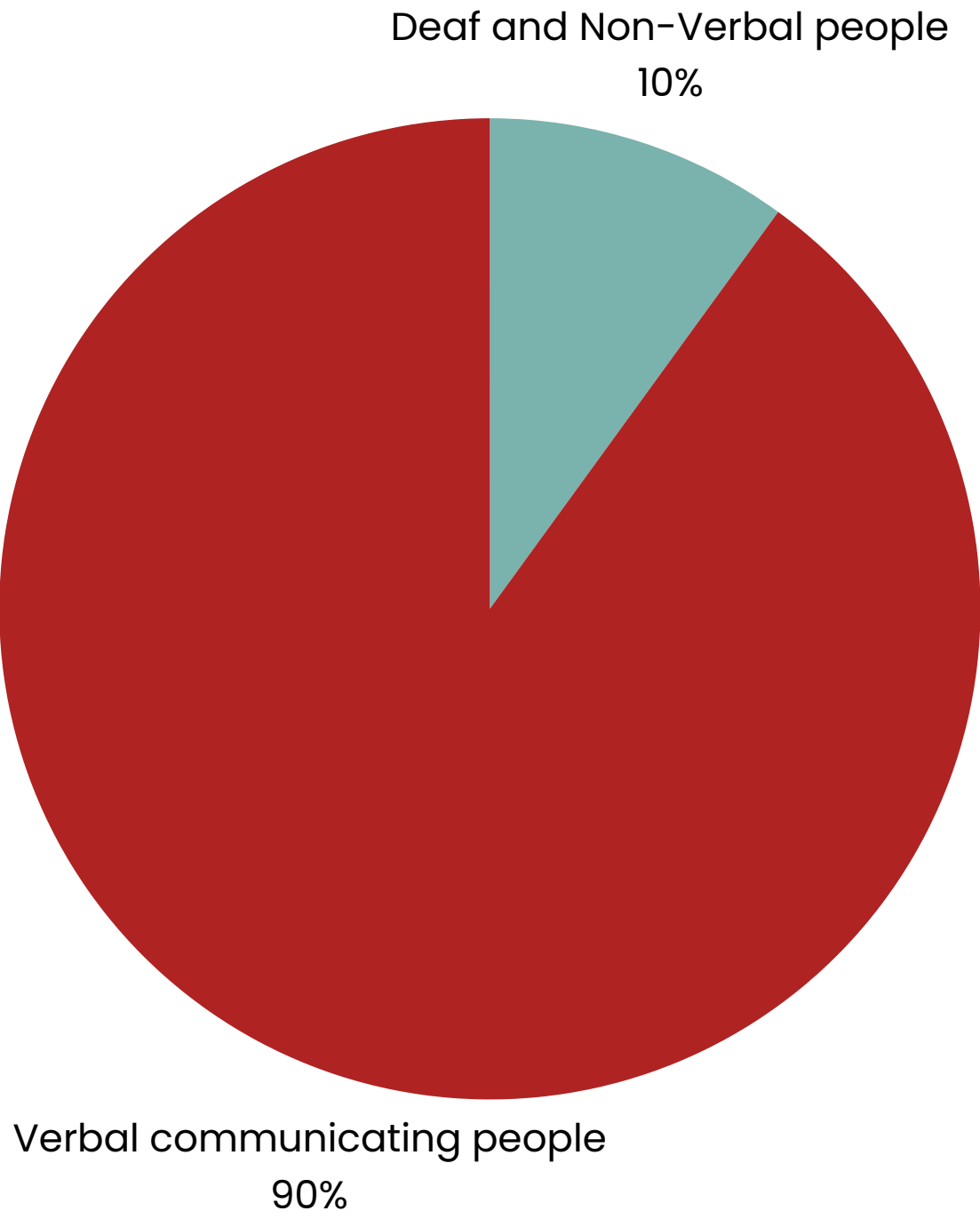|	LESS THAN HIGH SCHOOL	HIGH SCHOOL DIPLOMA / GED	SOME COLLEGE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S DEGREE	PH.D., J.D. OR M.D.
Hearing people	58%	70.2%	75.7%	80.1%	83.3%	86.4%	90.1%
Gap	26.3% gap	21.6%	19.7%	16.2%	12.8%	12%	17.7%
Deaf people	31.7%	48.6%	56%	63.9%	70.5%	74.4%	72.4%

IMPACTS & OUTCOMES :

Empowerment

We provide assistive technology that translates sign language into voice, enabling corporates to employ and empower deaf and non-verbal individuals.

Social Inclusion

Our technology bridges communication barriers, enabling deaf and non-verbal individuals to interact confidently in public spaces like food outlets and transport depots, helping them fully participate in society.

Awareness

Through our technology, we raise awareness about the challenges faced by the deaf and non-verbal community, advocating for a more inclusive society that values all voices.

Equal Employment

Our assistive technology allows corporates to hire and support deaf and non-verbal employees, promoting workplace diversity and inclusivity.
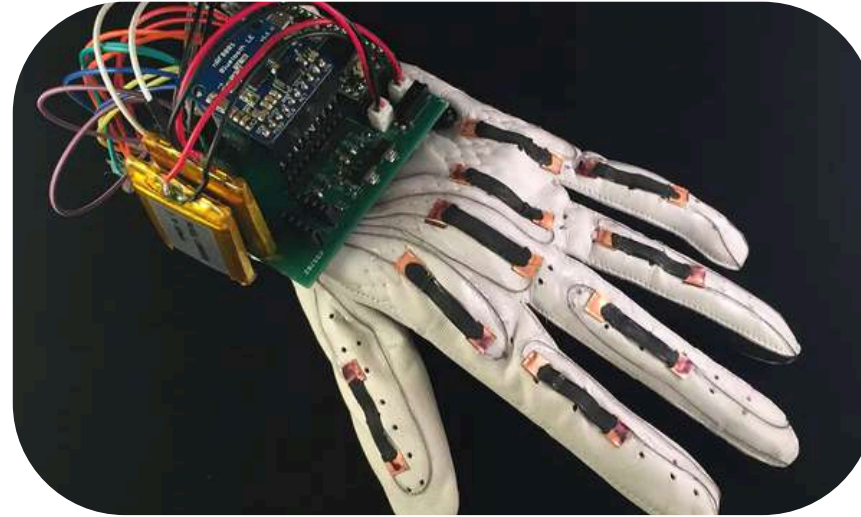
Competitors versus Our Project :

APP BASED

- A live sign language interpreter is connected on a virtual call
- Dependent on availability of interpreters
- Lack of privacy in conversation

GLOVE BASED

- Smart glove detects hand & finger movement and interprets
- Requires regular maintenance & frequent repair requirements
- Hardware based solutions are not as dynamic as AI solutions

OUR PROJECT

- Advanced AIML solution enabling contactless, real time interpretation
- Not dependent on a live person for interpretation and easier to push updates
- Compact & easy deployment