

Form 2: Literature Documents

1. Team No: 20

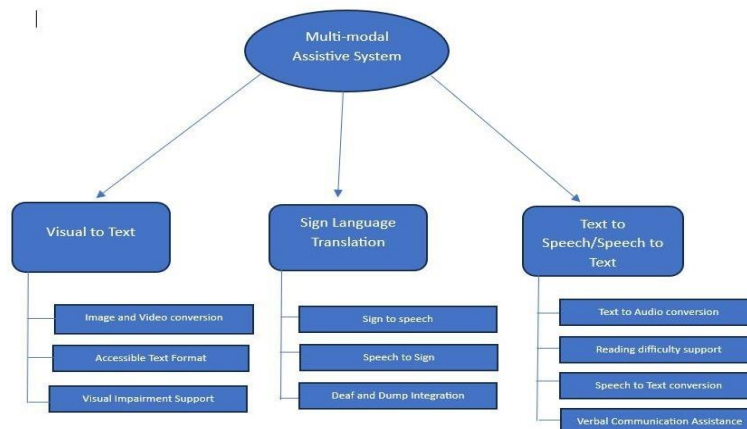
2. Project Title: Multi Modal Assistive System for People with Disabilities

3. Problem Statement: Millions of individuals with disabilities face daily challenges navigating communication and accessibility barriers. Deaf communities struggle to connect with hearing individuals, those with limited speech or writing abilities lack avenues for expression, and navigating environments can be daunting for those with visual or mobility impairments. Existing assistive technologies often address these challenges in isolation, failing to provide a holistic solution.

4. Problem Illustration: Imagine millions like islands in a sea of words, gestures missed, sounds garbled. Deaf voices yearn to join conversations, but bridges are fragile - interpreters scarce, lipreading a frustrating game. The written word too can be a fortress, thoughts trapped within limited speech or writing, expression stunted. Even the physical world becomes a hostile terrain - steps like mountains, curbs like canyons, for those whose bodies navigate differently. Technology, meant to be a lifesaver, often throws another knot - tools scattered, specialized, addressing fragments of the struggle, never the whole. It's time to build bridges, not islands, weave accessibility into the fabric of life, not stitch it on as an afterthought. For millions deserve not just survival, but to thrive, voices heard, thoughts shared, paths unbarred.

5. Concept Tree

(Tree Representation your concept hierarchy)



6. Comparison of Existing Strategies for Problem solve

Sl.No	Strategies	Advantages	Disadvantages
1.	Image recognition	High accuracy and continuous development and feature updates.	Limited offline functionality, Privacy concerns .
2.	AI and machine learning	Seamless integration and multilingual translation options	Limited vocabulary for niche signs, subscription-based services.
3.	Mobile Application	Human interaction promotes emotional connection .	Relies on volunteer availability, Potential privacy concerns for personal tasks.

7. Comparison of Existing Method from selected Strategies

Sl.No	Author	Strategies	Advantages	Disadvantages
1.	Niklas Kühl	AI and machine learning	Seamless integration	Privacy concerns
2.	Yu-An Chung	Image recognition	High accuracy and continuous development and feature updates.	Limited offline functionality, Privacy concerns .
3.	M Eisenstadt	Mobile Application	Human interaction promotes emotional connection.	Relies on volunteer availability, Potential privacy concerns for personal tasks.

8. References

- [1] Jinglun Shi Received August 23, 2019, accepted September 10, 2019, date of publication September 17, 2019, date of current version October 1, 2019 H. Xiao, J. Shi: Video Captioning with Adaptive Attention and Mixed Loss Optimization.
- [2] D. Hou *et al.*: Automatic Report Generation for Chest X-Ray Images via ARL Received January 13, 2021, accepted January 28, 2021, date of publication February 1, 2021, date of current version February 8, 2021.
- [3] Received January 26, 2021, accepted February 12, 2021, date of publication February 16, 2021, date of current version March 8, 2021. B. Xu et al. Application of Tensor Train Decomposition in S2VT Model for Sign Language Recognition

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