

THEME: Smart Education/ Edu-Tech/ Skill Development

PROBLEM STATEMENT: How can we develop an accessible platform for visually and hearing-impaired students, integrating sign language and visual aids to enhance accessibility and comprehension?

ABSTRACT:

In today's digital age, online learning platforms are essential in education and skill development. However, many existing systems do not fully accommodate students with visual and hearing impairments. These learners often encounter difficulties due to a lack of screen-reader compatibility, text-to-speech support, subtitles, and user-friendly designs. This creates a significant barrier to inclusive digital education.

To tackle this issue, this project introduces VirtuLift, an AI-based training management system tailored for visually and hearing impaired students. The platform includes features focused on accessibility, such as text-to-speech for visually impaired learners and automatic caption generation for hearing impaired users. It also has a screen-reader friendly design, supports keyboard navigation, and offers multilingual options. The system uses artificial intelligence to provide an intelligent chatbot assistant, create automated quizzes, summarize content, and offer personalized learning guidance.

VirtuLift supports multiple scalable courses and contains dedicated modules for students, trainers, and administrators. This ensures efficient content management, tracks assessments, and handles certifications. The system also provides digitally verifiable certificates in partnership with third-party organizations to boost credibility.

By merging accessibility, artificial intelligence, and organized training management, VirtuLift aims to foster inclusive education, reduce the digital accessibility gap, and empower visually and hearing impaired learners with equal chances for skill development and career advancement