

## FEATURES

1. Sign Gesture Recognition: Real-time recognition and interpretation of sign gestures through computer vision AI.
2. Translation to Text: Conversion of recognized sign gestures into written text using natural language processing.
3. Translation to Voice: Text-to-speech conversion to deliver audible voice output.
4. Animated Character Simulation: Visual representation of input words through an animated character's sign gestures.
5. Language Support: Focus on translating sign gestures between Arabic and English.

**Breaking Barriers,  
Inspiring  
Connections**

## "BRIDGING THE SILENCE, EMPOWERING COMMUNICATION"

### OUR VISION

Breaking barriers of communication, our Sign Language Interpreter app harnesses the power of AI and animation to empower the hearing-impaired, bridging the gap through seamless translation of sign gestures to text and voice.

### OBJECTIVE

Develop a Sign Language Interpreter mobile application using computer vision AI to translate Arabic and English sign gestures to text and voice. The app will feature an animated character that simulates input words through sign gestures. Additionally, evaluate the feasibility of integrating a hardware glove solution for sign language to voice translation.

### BUDGET AND RESOURCES

Allocate resources for research, development, testing, deployment, maintenance, and potential evaluation of a hardware glove solution.



**Unlocking  
Communication  
for All**

English/Arabic

# SLIEA

SIGN LANGUAGE INTERPRETER

**Translating Signs,  
Connecting Worlds**



## OUR MISSION

Our mission is to empower the hearing-impaired community by breaking down communication barriers through innovative technology. We strive to create inclusive solutions that enable seamless communication between individuals using sign language and those who may not be familiar with it. By leveraging cutting-edge computer vision AI and animation, we aim to provide accurate and efficient translation of sign gestures to text and voice, promoting accessibility and fostering equal participation in society.

## POWERED BY



## IMPLEMENTATION PLAN



Research and Development: Analyze sign language datasets and develop computer vision models for accurate gesture recognition.



Mobile Application Development: Design an intuitive UI, implement real-time gesture recognition, and integrate text-to-speech and animated character features.



Testing and Refinement: Thoroughly test the application, gather user feedback, and optimize performance and usability.



Deployment and Maintenance: Release the application on app stores and provide ongoing support.

## OUR GOAL

Our goal is to develop a user-centric Sign Language Interpreter mobile application that revolutionizes the way hearing-impaired individuals interact with others. We aim to create a solution that is intuitive, reliable, and visually engaging, ensuring accurate translation of sign gestures into readable text and audible voice. Through our application, we seek to facilitate effective communication, enhance understanding, and promote inclusivity, ultimately enriching the lives of both the hearing-impaired community and the general public.

# The Conclusion of **SLIEA**

The proposed Sign Language Interpreter app will empower hearing-impaired individuals by enabling effective communication through sign gesture translation. The integration of computer vision AI, text-to-speech conversion, and an animated character will enhance the user experience. Additionally, evaluate the potential integration of a hardware glove solution to complement the mobile application.

**SIGNS  
TRANSFORMED,  
VOICES  
AMPLIFIED**

