

INDIAN SIGN LANGUAGE DETECTION

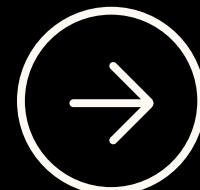
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THE PROBLEM & SOLUTION



There are a lot of models for sign language but none for Indian Sign Language



SOLUTION

A implementation of Random Forest classifier on a custom self made ISL dataset

- Learn alphabets, numbers, words, mathematics and science with interactive tutorials and live camera feature.
- Supervised Classification
- Trained two separate Random Forest classifiers – one for single-hand gestures and one for double-hand gestures

KEY COMPETITIVE ADVANTAGES

Interactive and Engaging Learning

Offers a dynamic and immersive learning experience that keeps users actively involved.

Personalized Learning Paths

Adapts to individual needs, providing customized educational journeys for each learner.

Real-Time Sign Language Translation

Leverages AI for instant translation, facilitating seamless communication for deaf and mute users.

Scalable for Growth

Designed to accommodate future expansion, supporting new features and broader applications as the platform evolves.

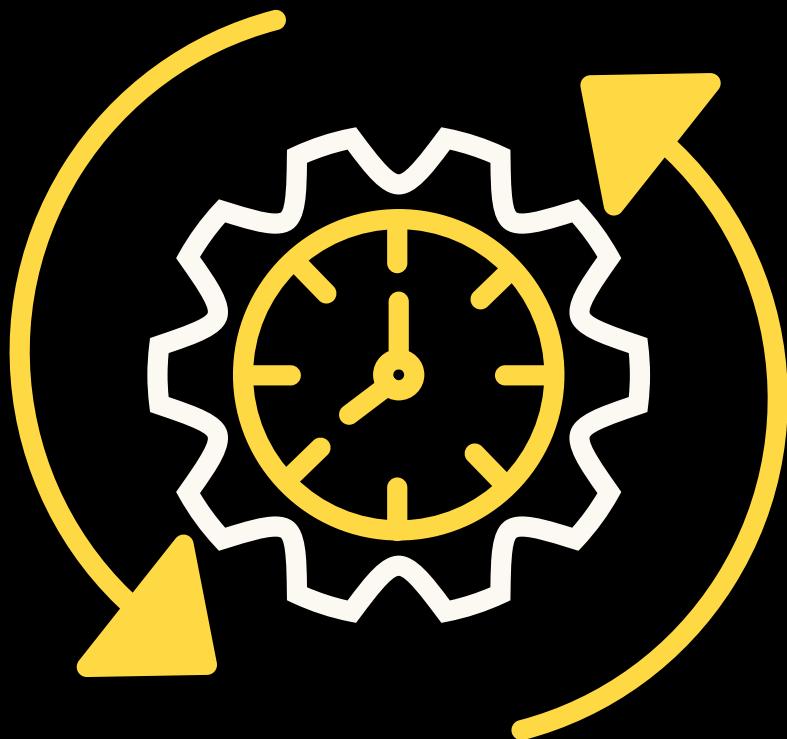


MARKET POTENTIAL & CHALLENGES



POTENTIAL CHALLENGES AND RISKS

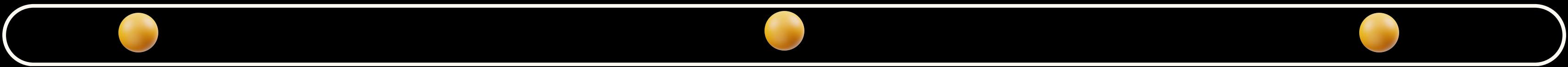
- Gathering a comprehensive ISL dataset
- Ensuring real-time gesture recognition with low latency.
- Ensuring model perform well on edge devices



MARKET FEASIBILITY

- Target Audience: Addresses a specific, underserved group.
- Competitive Analysis: Unique value needed.

FUTURE ROADMAP & INNOVATIONS



Model Optimization:

Apply quantization and pruning to reduce model size for efficient use on mobile and edge devices.

Accessibility:

Display pre-recorded ISL videos or animations based on input text to enhance accessibility.

Cross-Platform Deployment

Use React Native with TensorFlow Lite or Core ML for seamless deployment on iOS and Android.

THANK YOU

for your time and attention

