

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COLLEGE OF ENGINEERING TRIKARIPUR

SIGN TO TEXT AND SPEECH TRANSLATOR USING MACHINE LEARNING

DINIYA P – TKR20CS030

DIVYA A – TKR20CS031

DANIYA MARIYA JIJU – TKR20CS025

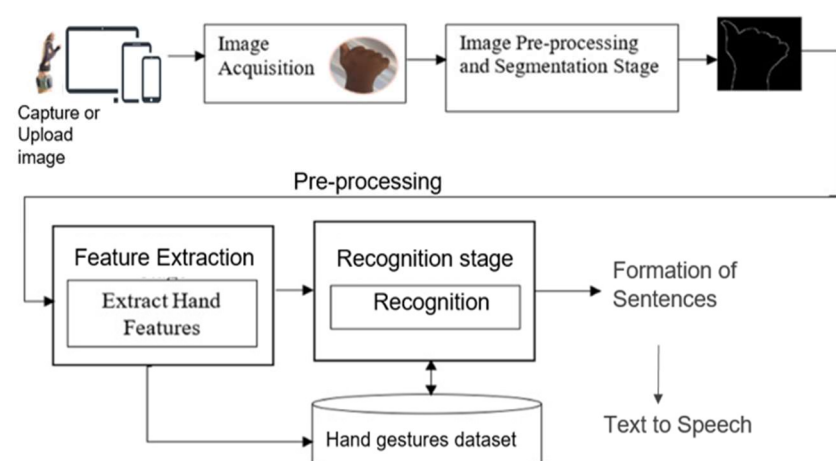
JISHNA BABU – TKR20CS086

Guide : Mr. Anoop P V Assistant Prof CSE Department

PREAMBLE

It becomes very difficult to converse with deaf and mute people. Language is a barrier in between normal people and mute people. On this basis we are introducing our project “Sign Language Translator to Text and Speech”, which will helps to recognize the signs and real-time conversion to speech and sentences.

ARCHITECTURAL DESIGN

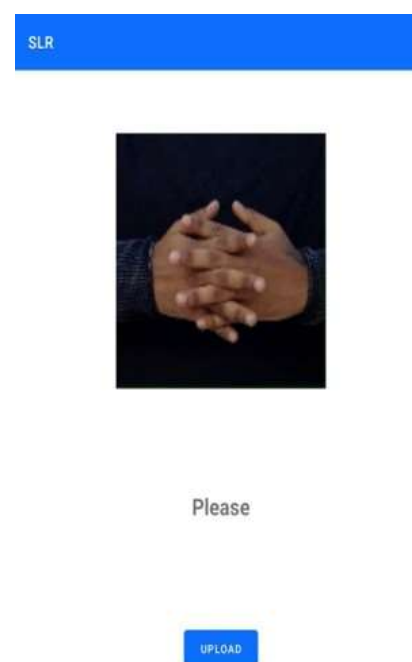
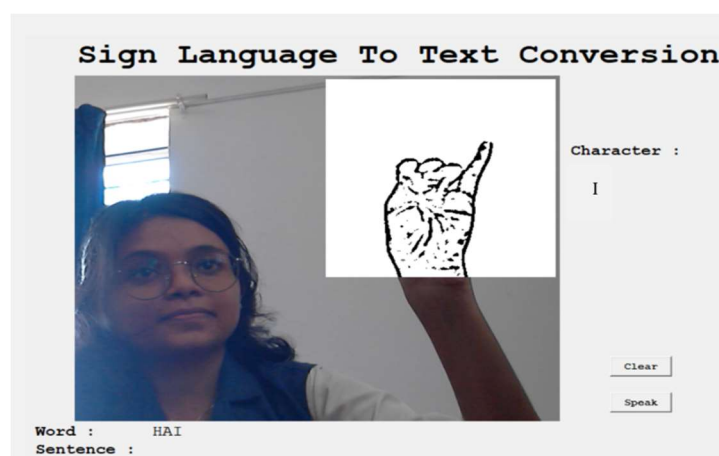


METHODOLOGY

- Python and java is used for implementation.
- Framework is Tensorflow.
- Dataset selection.
- Image preprocessing.
- Recognition using Convolutional neural network (CNN).
- Translated to text then Sentence formation and speech.

RESULTS

The system will capture image via video accumulation or upload via files as input then compare with trained models, sign were recognized and translated. Following are some snapshots.



FUTURE SCOPE

- More accurate prediction than the current system could be obtained by training it with a large dataset.
- Background elimination.
- Expansion to Multiple Sign Languages
- Improvements in computational efficiency and model optimization.
- Personalized Learning and Adaptation.
- Fast access and translation