

# Language Translation And Text To Speech Conversion System For Bhamashah And E-mitra Platform

# Project Idea

The main idea is to develop a system which can **convert** a language in **written** or **audio** format to **another** language in written as well as audio format. The system will be able to serve **client side applications**. Any website or mobile application can connect to this system and let the user translate the website content into another language with written as well as audio content.

There are three APIs in this system:

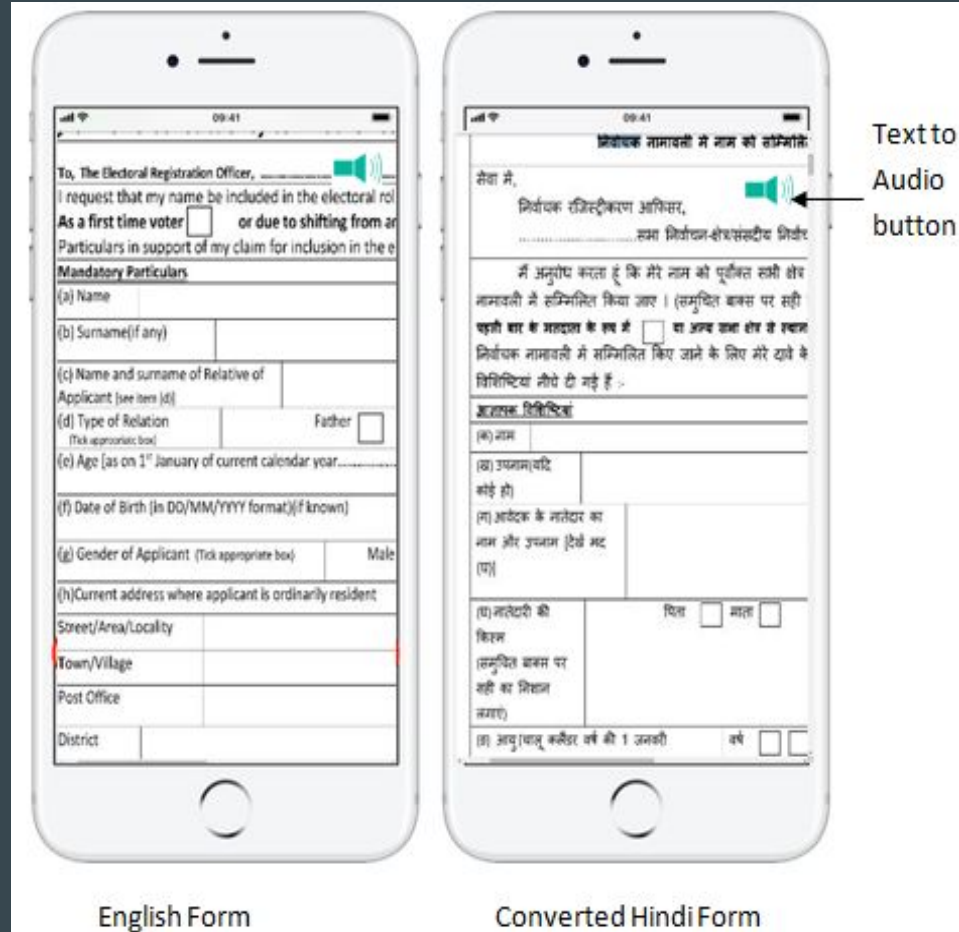
- 1) **Speech To Text:** This will be used to convert speech in one language to text in the same language.
- 2) **Text To Speech Api:** This will be used to convert Text in one language to speech in same language
- 3) **Language Translation Api:** This api takes Text in one language as input and outputs translated Text in another language.

# Use cases of Language Translation System

- 1) It can be used by **illiterate** or **blind** people for filling up the **application forms**, **getting information** about all government schemes, **paying** through **e-mitra** payment solution etc.
- 2) It can be used to **translate** the **video files** in another language to video file in a language which can be understood by the people of Rajasthan.
- 3) Realtime translation of video is possible using this Api's
- 4) Others can integrate these Api's into there websites and applications and make them accessible to the illiterate and blind users.

# Chat Application

This is an application of our language translation and text to speech api. Users can get information about all the government schemes, fill there application forms, apply for bhamashah yojana, pay for bills using e-mitra platform api and all these without typing anything, Users get form field in there native language as speech from bot where the translation will be the responsibility of the speech to text api.

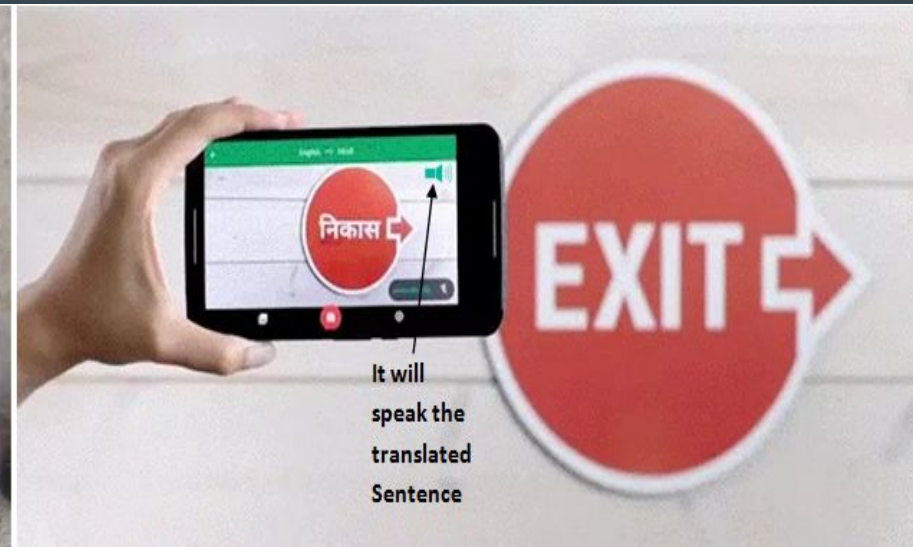


# Flow of the BOT



# Other Applications Of Chat Bot

Users can click the photos of any website, application or hard copy documents and it will take the text out of the image and translate it into the language of user preference. Translated language is then converted to speech and user can read the translated version or hear the speech according to preference.



# Technology Stack

## 1) Language Translation System

- Django

- Django REST Framework

- Google Translate Api

## 2) Chat Bot

- React Native

- E-mitra Platform API

- Bhamashah Platform API

- Rasa NLU Library for Natural language conversation