

# FARMER FRIENDLY AGRICULTURAL SYSTEM USING TEXT TO KANNADA SPEECH APPLICATION

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## **Introduction:**

Languages are the oldest way of communication between human beings whether they are in spoken or written forms. In the recent era, visual text in natural scenes might carry very important and useful information. Translation of one language to another language is very important in every day of a life to share information and communicate. Kannada language is one of the most famous South Indian language and is also one of the Dravidian language. Translators are used by travel industries to provide translation facilities to holiday makers. Due to large number of language, Image processing has high significance in India. Therefore, the scientists have started to digitize these images, extract and intercept the data by using specific techniques like OCR, and then perform Text-To-Speech synthesis (TTS). It is done in order to read the information aloud for the benefit and ease of the user.

The user connects with the mobile app and takes a picture of a printed document or selects a shot from the file. The picture is forwarded to the framework uses OCR to identify text in an image. Or Text is given as input and system uses the language-translation tool i.e. Text to Speech Synthesiser an API to interpret the accepted text and the OCR system Recognises text, and the language converted, are returned to the mobile app for view and sent to the user in the message format.

## **Objectives:**

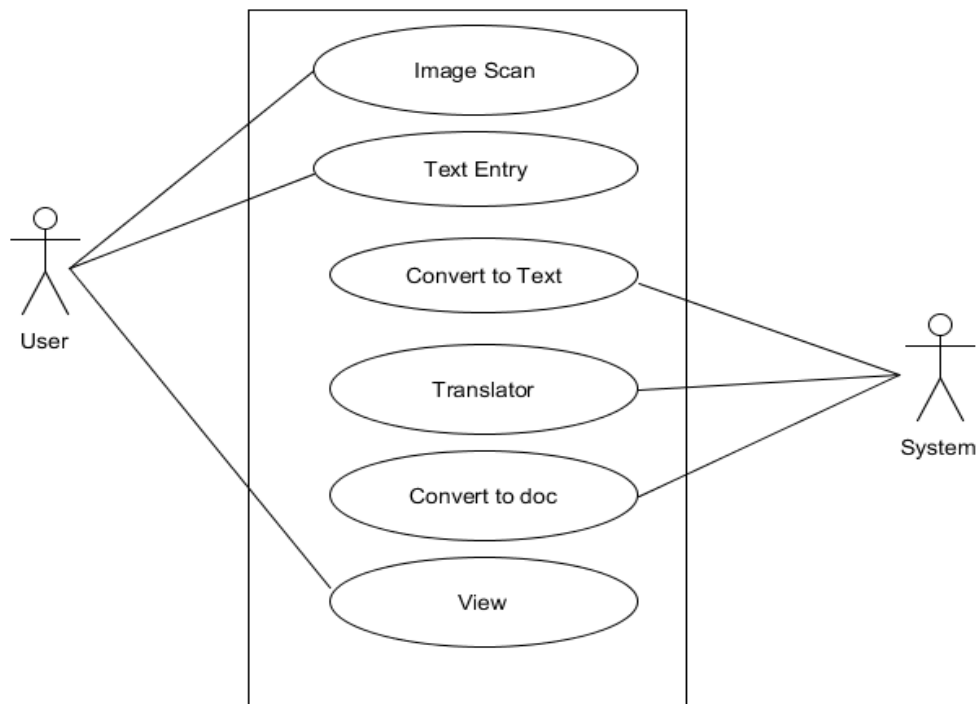
The goal of the Translation practice is to found the language skills of the learner, to refine their thematic and cultural knowledge and to know the meaning of unknown language.

1. Develop a system able to do conversion between the languages.
2. Provide an easy and simple for translation in speech format.
3. Endow good Experience to the user.

## **Methodology:**

1. Scanning the Image: Through the mobile camera the images (English documents) are scanned.
2. Extract text from image: The English text are extracted from the image that is scanned using OCR.

3. Select the language: Language needs to be selected. So that the extracted English text from the scanned image can be converted to the selected language (e.g. Kannada).
4. Translate: After the selection of the language the extracted English text is converted into selected language (e.g. Kannada) using API.
5. Text-to-speech: After conversion the speech is produced using Text-to-speech synthesizer.
6. Share: Finally the share option is provided so that the converted text can be shared to other person.



**Conclusion:**

Here we are making an attempt to develop an application for the people of remote villages who only know Kannada language and want to know about the documentation or any other land related details. We have done a literature survey to know more about the methodology being used in the projects to convert Text-to-speech. Smartphones are recognised in real life today as the most widely used mobile devices. Since smartphone-integrated hardware can perform far more functions than conventional phones, smartphones are no longer just a contact unit, but rather a powerful computer unit capable of taking images, recording videos, browsing the internet, etc. With the growth of technologies, such tools can be used to perform text identification and conversion. The developed application can translate from a text to text language and image to text translation on the most used languages.

The application was tested for accuracy, translation time, and memory usage. The application maintained 99% accuracy when it was used to translate from one language to another. The translation time of the android smartphone achieved excellent time, the application was able to translate from one language to another within 47s.

**Scope for future work:**

The memory used is deficient compared with other application on android phone. The accuracy of the translation of the application is also very encouraging, with 99% accuracy. Due to a larger screen and a higher number of background processes, the application energy consumption is still deficient compared to other applications on the phone. For further research, the application should include text to speech, speech to text, and even speech to speech translation, which will help visually impaired.