



SMART INDIA
HACKATHON
2022

Basic Details of the Team and Problem Statement

Organization Name: University Grants Commission (UGC).

PS Code: VS940

Problem Statement Title: Design of translation software with multi inputs to translate English to Hindi OR vice-versa to promote extensive use of Hindi language in official matters

Team Name: GenericGenius

Team Leader Name: Shreya Manjucha

Institute Code (AISHE): C-33681

Institute Name: Thadomal Shahani Engineering College

Theme Name: Miscellaneous

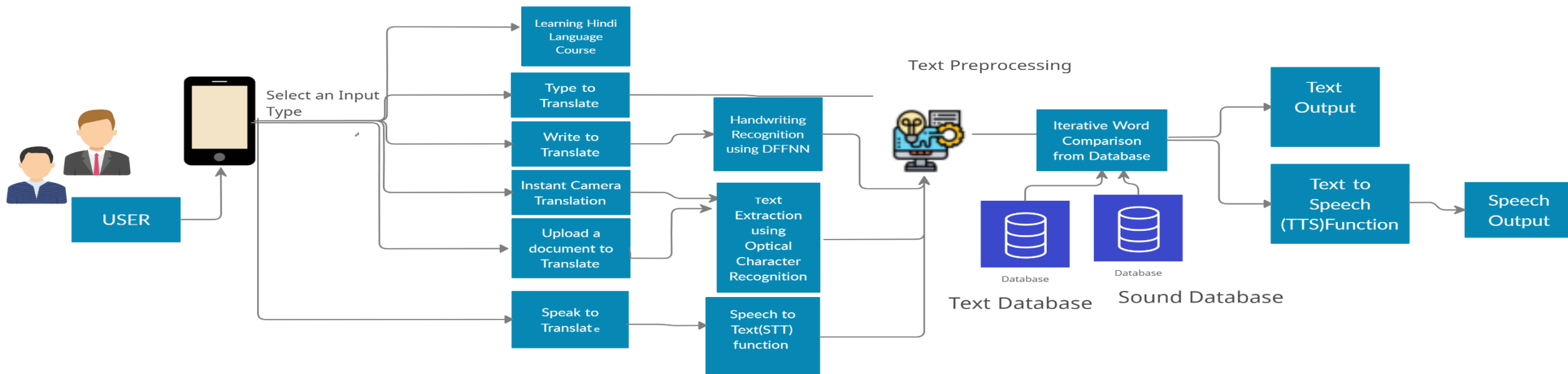
Idea/Approach Details

Description:

- A translation software to translate from **Hindi to English** and vice-versa.
- Users can give input in multiple formats such as **text, speech, image, or handwritten** input
- Users can also **upload any official document** such as a birth certificate or case reports and translate it into their preferred language.
- Our model can also convert the **deaf and dumb** individual's **hand signals** into a Hindi/English **audio medium**, which an ordinary individual can willingly comprehend and vice versa.

Technology stack:

- **Machine Learning:** TensorFlow, Keras, and OpenCV for NLP , MT, TTS, STT
- **Frontend-**Flutter, React
- **Backend:** Firebase



Idea/Approach Details

Use Cases:

- **Social media** is a huge part of our lives today and helps you reach wider audiences in very short times. Your followers can help you make your posts go viral by sharing, liking, commenting, tweeting, and pining. You need to be able to **engage with your customers** in rural India using Hindi.
- **Contracts, case reports, witness statements, depositions, birth, marriage, and death certificates, judgments** – all these require translation for better understanding.
- **Reading menus, street signs, and electronic manuals** in other languages is often a downright herculean task. Our app allows your **phone's camera** at the inscrutable text in front of you and instantly translates it to a language of your choosing.
- Most of the books for **higher studies** are available only in English. A student can scan the book and **upload the pdf** and get a Hindi version of the book in pdf format.

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Dependencies:

- **Speech-to-Text API** -Its high accuracies and extensive feature list, like Speaker Diarization and Sentiment Analysis.
- **English-Hindi corpus**- It contains parallel corpus for English-Hindi as well as monolingual Hindi corpus
- **Tesseract**- Tesseract performs very well on scanned documents, and challenging applications, such as scene text and recognition. ocr methods are more robust.

Show stopper:

- Our app has provisions to help **deaf and dumb individuals** signal to audio or text.
- Our app also provides **basic and intermediate courses** to learn the Hindi Language.
- Our ML model takes into account **grammar, idioms, conventions**, and, above all, the **sense of the original language** into consideration when translating it into the target language and preserving its meaning as close as possible to the original language.

Team Member Details



Team Leader Name: Shreya Manjucha

Branch: B.E.

Stream: Information Technology

Year: III

Team Member 1 Name: Priyansi Chogale

Branch: B.E.

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Team Member 5 Name: Arpita Pawar

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