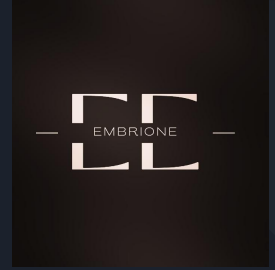Embrione

KodiKon

National Education Policy

MULTILINGUAL VOICE ASSISTANT FOR ACADEMICS

"Using NLP based tools to improvise academic learning in the convenience of the users native tongue."

<Python our souls>

- Aavish Gilbert J
- Aditya Rao
- Aashish Sharma
- Abhishek Shrinivas

PROBLEM STATEMENT

- Indians come from an ethnically diverse background with 22 official languages and many more regional languages. Education here is primarily English centric and people coming from a poor English background face a lot of difficulties coping up due to the language gap.

- There are many students who are proficient in the language of their comfort (Regional languages) and find it easier to understand their course work better when compared to the previously accustomed English language, be it in an educational website or a course book.

- Most study resources being written in English hampers the opportunity for a student not well versed in English to acquire the required knowledge/skills which is being imparted by the curriculum. This gives rise to a need for the course work to be available in many languages through a medium which should be simple to use and accessible by a student.

Solution

- We will be building an NLP model which would be capable of receiving language input which is used to process and extract information from the web(ex- if you ask <help me understand automata theory>, the assistant would web scrape the internet or ur course book as per ur wish, summarises it using NLP tools and delivers it to you). The delivery is done in voice mode, in a language which is preferred by the user(could be the same or different as the initially used language). Some additional NLP tools include sentiment analysis, grammar check etc.
- Our idea would be to address a very important aspect of the national education policy, which encourages the use of regional languages in everyday academics to reduce the dependency on English of the younger generation.
- Our main target audience would be students who prefer studying in the language of their choice and want an interactive solution which answers their queries in their preferred language.
- We believe this project of ours will help to increase the engagement of the regional languages in mainstream academics which is one of the main goals of the national educational policy and also help the student in comfortable understanding the course subject.

WHAT

HOW

WHY

We have built a voice-based multilingual assistant that aids students in their academics by summarising their coursework in their native tongue.

We have implemented this assistant using Natural language Processing techniques and speech detection algorithms which are used to understand a non-English language to analyse and reply. This is entirely different from just google translate because you are expected to only ask the question and the bot will fetch the answer for you than just translating it.

We believe this project of ours will help to increase the engagement of the regional languages in mainstream academics which is one of the main goals of the national educational policy.

Technology Usage

- The domains covered here are Natural language processing and Voice recognition

- The programming language used is python, the libraries are iNLTK, NLTK, gtts, googletrans, pyqt5, BS4, wikipedia api, TextBlob and a NLP engine.

Business Prospective

- Our solution can be implemented in schools, and also workplaces which requires anything to be studied, it can also be used in research to find how the context of a fed source changes with the varying language

- Yes, we can generate revenue by using a premium feature model, which would include suggestions and analysis on the content provided by the user(ex, sentiment analysis, spell check, etc).