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Text Extractor and Audio Convertor Using Artificial Intelligence

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ABSTRACT

Python based AI conversion which will works on the transformation of complete text file into an audio file, so that it can be listened anywhere and at any particular timing in the converted audio file. The modules which were used in this work are predefined modules in the python, but used for different purposes. The main moto of the conversion system is to support the physical impaired peoples. This may majorly help them to listen all kind of files and learn anything without the help of any other people or with the morse code language which they will primely use to read all kind of books for their understandings. The text file of most of the languages will be converted to a pure audio of that source language itself. After the execution a window will appear for the selection of the target file which is to be transformed and then, the selected file text will be moved for the extraction of text from the file. Initially, every text from the file will be completely extracted with tikka server and then, the texted will only be processed for the further steps. So, that the original text file would not get any damage during the operation of conversion.

Keywords - Tkinter dialog, tikka server, Operating System (OS), LangDetect, Google-Text-to-Speech (GTTS).

I. INTRODUCTION

Artificial intelligence (AI), the ability of a digital computer or computer-controlled robot to perform tasks commonly associated with intelligent beings. The term is frequently applied to the project of developing systems endowed with the intellectual processes characteristic of humans, such as the ability to reason, discover meaning, generalize, or learn from past experience. It has been demonstrated that computers can be programmed to carry out very complex tasks, for example, discovering proofs for mathematical theorems or playing chess with great proficiency. Still, despite continuing advances in computer processing speed and memory capacity, there are as yet no programs that can match human flexibility over wider domains or in tasks requiring much everyday knowledge. On the other hand, some programs have attained the performance levels of human experts and professionals in performing certain specific tasks, so that artificial intelligence in this limited sense is found in applications as diverse as medical diagnosis, computer search engines, and voice or handwriting recognition.

II. PROPOSED SYSTEM

The Python based AI conversion which will works on the transformation of complete text file into an audio file, so that it can be used anywhere and at any

particular timing in the converted audio file. The modules which were used in this work are predefined modules in the python, but used for different purposes. The text file of most of the languages will be converted to a pure audio of that source language itself. After the execution a window will appear for the selection of the target file which is to be transformed and then, the selected file text will be moved for the extraction of text from the file. The whole extracted text will be displayed and the path of the file will also be displayed with. As the final move, the text will be changed to an audio and then only it will made as a complete audio file with Google-Text-to-Speech (GTTS) module. The output file will a MP3 file (.mp3) file format, so it can suit on all the device and can be used to listen at any time the listener needs the audio file.

III. ALGORITHM

A. Tika Server

Tika server helps in extraction of letters with the prefect content accuracy so that the content in the file would not change the meaning of the document. Can extract text all kind of files.

B. Operating System (OS)

Operating System is used to get the location of selected particular file and to get the output file in the same source location of the file.

C. Google Text-to-Speech (GTTS)

Google text-to-speech which supports in the conversion of text to audio or audio file. All those extracted contents would be converted to specified language which is detected.

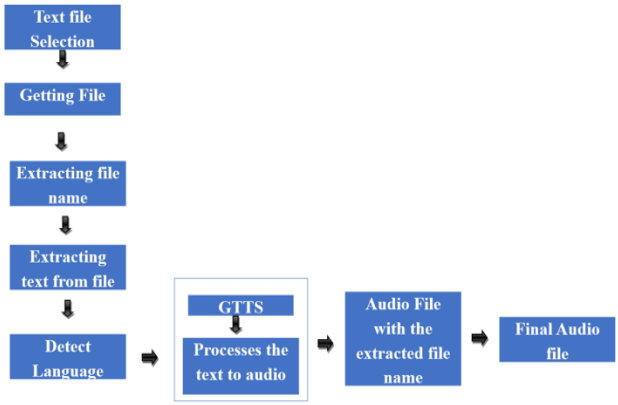

FIGURE 1: SYSTEM ARCHITECTURE

IV. MODULES DESCRIPTION

A. File Selection Module

A window dialog would appear which will represent the user for selecting the targeted file. Through this any kind of text file can be selected and that file can be in any document type or document extension. Then, the text will be extracted from the selected document in the further detection work. The file will be moved for the next modules processing.

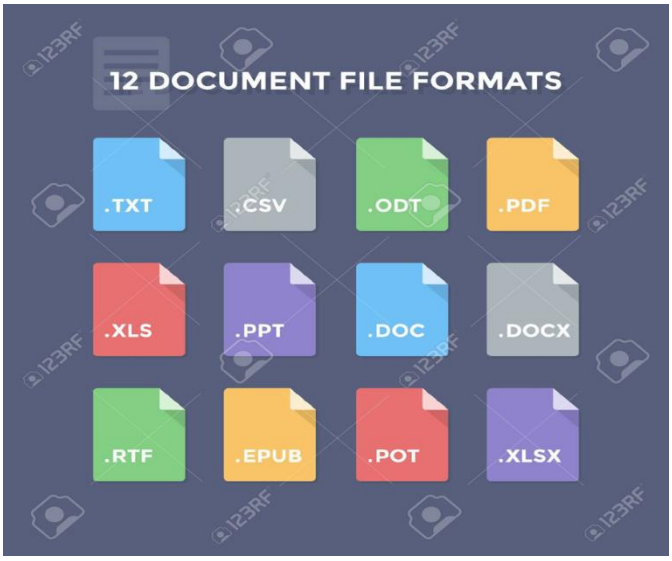

FIGURE 2: FILE FORMATS

B. Language Detection Module

FIGURE 3: LANGUAGES

The file language will be detected from the document which user selected. With the support of some package, the language of the file would be detected by the system. Then, the detected language would be shared in upcoming operations of the conversion.

C. Text-To-Speech Module

The Text-to-Speech module will convert the entire extracted text into a speech with the help of python packages. Each and every word will be processed and converted into a speech by the system which user can use for listening.

FIGURE 4: TEXT-TO-SPEECH

D. Conversion Module

The final module will be converted as audio file and it will be stored in the respected location of the file. The full audio will be in the format of MP3 or with the extension of .mp3.

FIGURE 5: CONVERSION PROCESS

V. IMPLEMENTATION

System implementation is the important stage of project when the theoretical design is tuned into practical system. The main stages in the implementation are as follows: Planning, Training, System testing and Changeover Planning. Planning is the first task in the system implementation. Planning means deciding on the method and the time scale to be adopted. At the time of implementation of any system people from different departments and system analysis involve. They are confirmed to practical problem of controlling various activities of people outside their own data processing departments.

The line managers controlled through an implementation coordinating committee. The committee considers ideas, problems and complaints of user department, it must also consider: The implication of system environment, Self-selection and allocation form implementation tasks, Consultation with unions and resources available, Standby facilities and channels of communication.

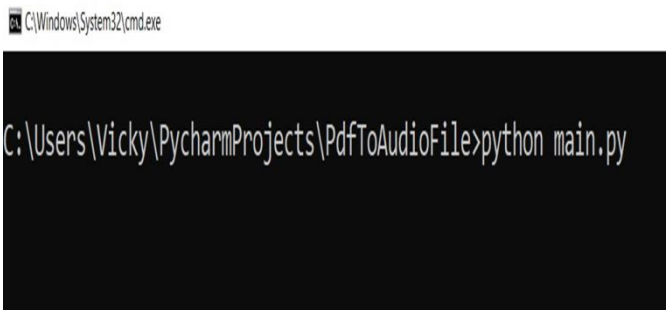

FIGURE 6: INITIATION OF PYTHON CODE

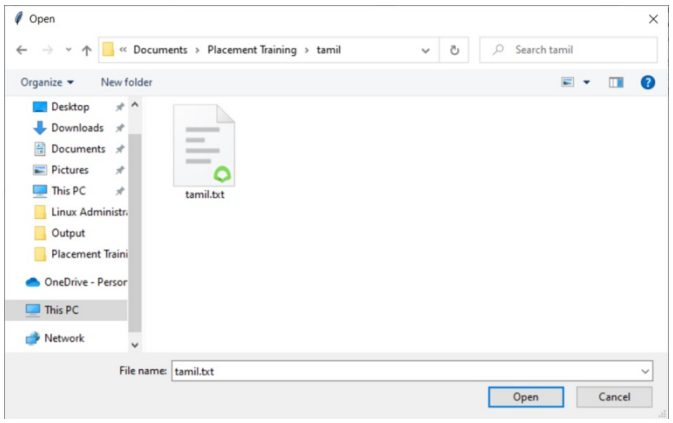

FIGURE 7: SELECTION OF TEXT FILE

FIGURE 8: EXECUTION OF FILE

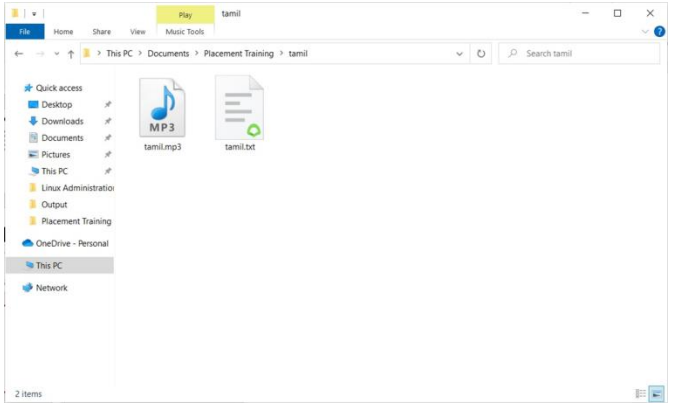

FIGURE 9: OUTPUT FILE

VI. CONCLUSION

Most of the books in nowadays are only available as e-books and all books are come in the form of e-book. So, the main purpose is to help visually impaired people can read and learn any kind books which they are need to read and know about those books. There are some other alternative works too like the business people can read all kind of book with this method and there would not be any difficulties to say bed time story for the small children. With this many works can be reduced and may help in gaining the knowledge with less efforts. In future, the work will fully made as a completely free android application for all with addition features like speed control, voice changing and some more.

VII. FUTURE WORK

In future, the system will be enhanced with the ability of be having changing of the voice of the machine and completely made as an application for the both Android and iPhone. The speed of the voice over will also made as a controllable one, directly played in a player and some more addition things will be added.

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