

## Extracted Text To Speech Conversion Using Text To Speech Synthesizer

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**Abstract** -Now-a-days Image processing has become one in all the peak of technology. Previously it absolutely was impracticable to compute data at higher or faster rate, with the assistance of leading technology it's now possible to process data at higher rate to induce optimized hence better result. Speech is that the oldest means of communication between people and it's also the foremost widely used during this paper an innovative, efficient and real-time cost beneficial technique that enables user to listen to the contents of text images rather than reading through them as been introduced. It combines the concept of Optical Character Recognition (OCR) and Text to Speech Synthesizer (TTS). OCR is employed to recognition of character with high accuracy. Text-to-Speech could be a device that scans and reads English alphabets and numbers that are within the image using OCR technique and changing it to voices the event of a text to speech synthesizer are of great help to people with visual impairment and making through large volume of text easier.

**Key Words:** Intelligibility, Naturalness, Text-to-Speech (TTS), Speech Synthesis.

### 1.INTRODUCTION

There is plenty research work has done on Pattern Recognition which comes under Image processing. OCR well-known as Optical Character Recognition is one in every of the leading branch of the Pattern Recognition. The system reduces human efforts together with time. It can even be helpful for the one that doesn't know the pronunciation of particular words. Now a day it's noted that the foremost challenging aspect in Text to speech generating natural sounding speech and thus the final word goal of text to speech synthesizer is to return up with speech from text that sounds natural to the human ear as if it had been somebody's read speech. The strategy of text into speech converting involves two major phases, text processing and speech Synthesis. Text processing involves processing of raw text to supply transcription of the text, together with the required rhythm. Speech synthesis is that the bogus production of human speech. Speech synthesizer are often implemented in software or hardware which gets its input from extracted text process and covert into a speech waveform and even the quality of a speech synthesizer is measured in such a way that its similarity to human being voice. A text-to-speech Synthesizer allows people with visual disability vocally impaired and reading disabilities to concentrate to written works on a knowledge

processor. The extracted text are often as an example data from a application, standard ASCII from a mobile text-message, email or scanned text from a newspapers. The extracted text is processed and also the resulting speech is produced. Hence speech synthesis task is to develop transparent and the usual sounding voice which convey the information to a user during a preferred accent, language, and voice.

### 2.LITERATURE SURVEY

#### A. A Survey of OCR Applications

OCR in numerous fields and further presents the experimentation for 3 important applications like Captcha, Institutional Repository and Optical Music Character Recognition. They made use of an enhanced image segmentation algorithm supported histogram equalization using genetic algorithms for optical character recognition. The paper uses images of a music script which is used to extract musical signs and encryptions using the different algorithms. The paper presents brief explanations of the applications in various fields along with experimentation into few selected fields. The proposed method benefit is to extract all kinds of bimodal images including blur and illumination. [1]

#### B. Optical Character Recognition

OCR technology uses scanning acquisition of printed documents as optical images. Recognition- involves converting these images to character streams representing letters of recognized words and also the final element of the words involves accessing and even storing the converted text. Converted text is referred as extracted text. When, the user is ready to capture an image containing text of interest using the Mobile camera. The specified area of the image is processed on the device so on optimize it for transfer and input to the OCR. Speech synthesizer is employed to convert extracted text into the voice. Firstly it analyses text and transforms text into pronounceable speech form. Speech synthesizer performs conversion of grapheme to phoneme form and uses voice characteristics of somebody. Most of the character recognition systems are recognized through the input image with a scanner and computer software. There is a controversy within the scale of the pc and scanner, as computer and scanner requires heap of space. Some to beat problem of computer and also the scanner occupies an oversized space, optical character recognition (OCR) system supported android phone is

proposed. The speed of character recognition is slow, so the character recognition method is presented by OCR technology with android phone of higher quality camera. [2]

**C. A Survey on Optical Character Recognition System**

In this paper, various techniques of OCR has been presented. OCR is not an atomic process but comprises various phases such as pre- processing, acquisition, segmentation, classification feature extraction and post-processing. Each steps has been discussed in detail in this paper. The OCR system can a be used in different practical applications so that It will help for various other real- time applications such as number-plate recognition, smart libraries Despite of the significant amount of many research in OCR such as recognition of characters for language likes Arabic, Sindhi and Urdu still remains an open challenge.[3]

**D. A novel algorithm for Optical Alphabet Recognition**

This segment presents several discussions regarding numerous OCR systems existing nowadays. In proposed algorithm might be damaged as a kernel utilized for solitary alphabet finding within an entire OCR description method with no requirement for any compound mathematical operations. The approaches are that, it doesn't employ any databases and the libraries of picture matrices to differentiate letter, but it is a special algorithm to differentiate alphabets in its position. The eagerness for the improvement of that algorithm was the easy actuality that English alphabets are permanent glyphs and that they shall not be altered forever. Caused by this reality procedure of non-expected neural networks and vector based information education supply approximately perfect outcomes, but these are performing many outmoded work [4].

**3.METHODOLOGY**

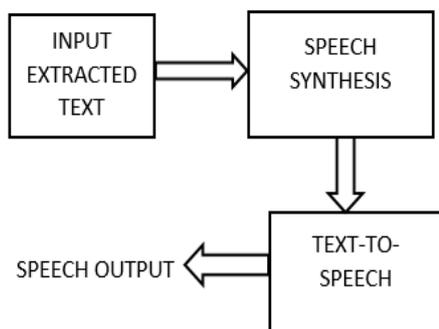


Fig1: Block Diagram of Text-To-Speech

The software development kit block of the c# speech is used to compile the desired program or code module. To feed the data text from the database file or directly to the editor Extracted text input block is used. The most important

qualities of a speech synthesis system are intelligibility. Naturalness describes how closely the output sounds like human speech, which the output is easily understood. The ideal speech synthesizer is both intelligible and natural. Speech synthesis systems usually have more characteristics. Speech output is used to deliver the sound of the corresponding text in to desired manner. This method is built on Microsoft platform. Microsoft .NET 4.5 framework using C# Programming in Microsoft Visual Studio 2010 Environment tool is used for speech synthesizer.

**4. RESULTS**

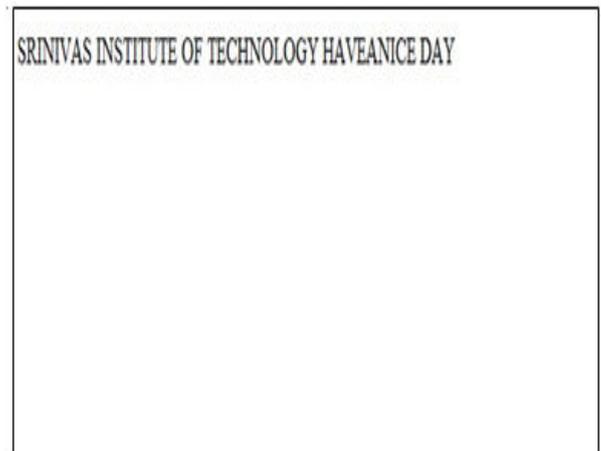


Fig2: Extracted text with white background of result 1

The above image displays the extracted text from an image.

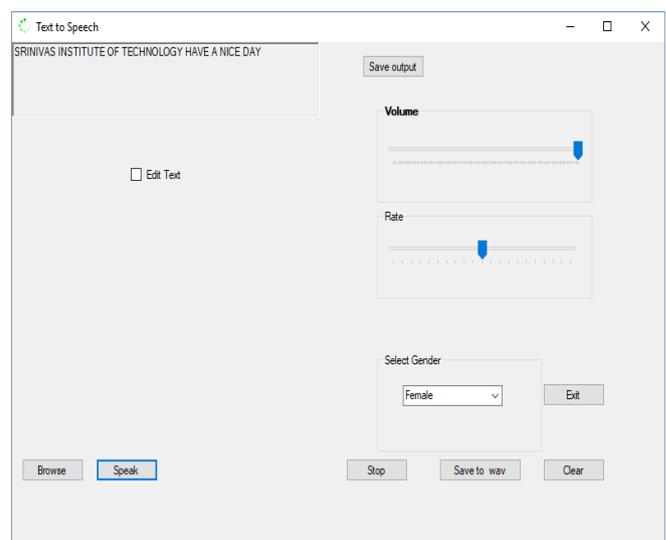


Fig3: Output of Text to speech of result 1

This figure shows that the extracted text is converted into speech.

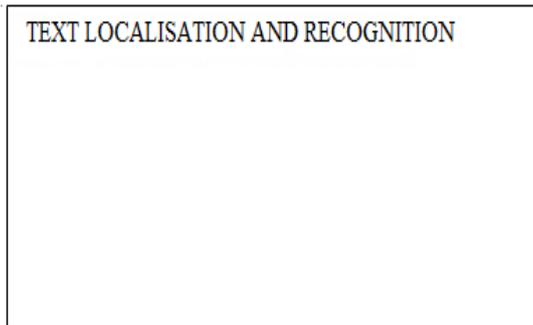


Fig4: Extracted text with white background of result 2

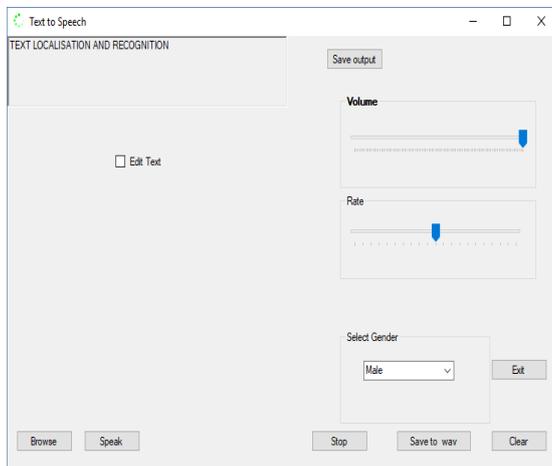


Fig5: Output of Text to speech of result 2

## 5. CONCLUSIONS

Rapidly growing aspect of computer technology is Text to speech synthesis and is increasingly playing a various role in the way we interact with the system and interfaces across a variety of platforms. In this paper, we discussed the topics relevant to the development of Speech to text systems. This system is very useful for dumb and deaf people to Interact with the other peoples from society. Speech to Text synthesis a research and application area in the various fields of multimedia interfaces. Extracted text inputs like the sentences, alphabets, numbers and words are given to the system. Text to speech conversion received a better results which perfectly audible. The .Net framework system contributes a satisfactory result. Hence this system is very much used in email readings, web based application and so on for making an intelligent speaking system.

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