

20CS312 MINIPROJECT
AUDIO COMMENTATOR

A MINI PROJECT REPORT

Submitted by

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BONAFIDE CERTIFICATE

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EXTERNAL EXAMINER

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ABSTRACT

A text to speech synthesizer is an application that converts text into spoken word by analyzing and processing the text using Natural Language Processing and then using Digital Signal Processing technology to convert this processes text into synthesized speech representation of the text. Here, we developed a useful text-to-speech synthesizer in the form of a simple application that converts inputted text into synthesized speech and reads out to the user which can then be saved. The development of a text to speech synthesizer will be of great help to people with visual impairment and make making through large volume of text easier. Text-to-speech (TTS) is a type of assistive technology that reads digital text aloud. It's sometimes called "read aloud" technology. TTS can take words on a computer or other digital device and convert them into audio. TTS is very helpful for kids who struggle with reading, but it can also help kids with writing and editing, and even focusing.

LIST OF FIGURES

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LIST OF ABBREVIATIONS

S.NO	ABBREVIATION	EXPANSION
1.	OS	Operating System
2.	HTML	Hyper Text Markup Language
3.	CSS	Cascading Style Sheets
4.	JS	Java Script

CHAPTER 1

INTRODUCTION

1.1 Problem Statement

TTS **gives access to your content to a greater population**, such as those with literacy difficulties, learning disabilities, reduced vision and those learning a language. It also opens doors to anyone else looking for easier ways to access digital content.

1.2 Project Scope and Objective

1.2.1 Scope of the Project

Text-to-Speech Module is **a multi-language voice synthesizer that converts a stream of digital text into natural sounding speech**. Its simple command-based interface makes it easy to integrate into any embedded system.

1.2.2 Objective of the Project

The main objective of the system is helpful for persons having learning disabilities or visually challenged. Prevents eye from strain, and user can sit and listen comfortably. Saves time especially while driving, exercising, Easy to use. Help improving spelling, reading, writing skills.

CHAPTER 2

OVERALL DESCRIPTION

2.1 Project Specification

Technology today is turning towards conversational interfaces. Users are verbally speaking to their devices using speech, often accomplishing tasks by delegating them the way they would to a human. To keep up with the pace of changing technology, you must ensure your product can talk back. With Text-to-Speech (TTS), your company can vocalize anything, including dynamic values like credit card balances and customer names. This provides an intuitive, natural customer experience without the need to record a voice actor dictating every word phrase.

Text-to-Speech (TTS) is a powerful speech synthesis technology that can vocalize written text into audible speech, rendered in a clear, human like voice.

By using TTS to give voice to your business, you can provide a vastly impressive and enjoyable customer experience. Our speech synthesis technology helps companies drive automation and increase efficiency by reducing operational costs—all while improving their customers' experience.

2.1 Methodology

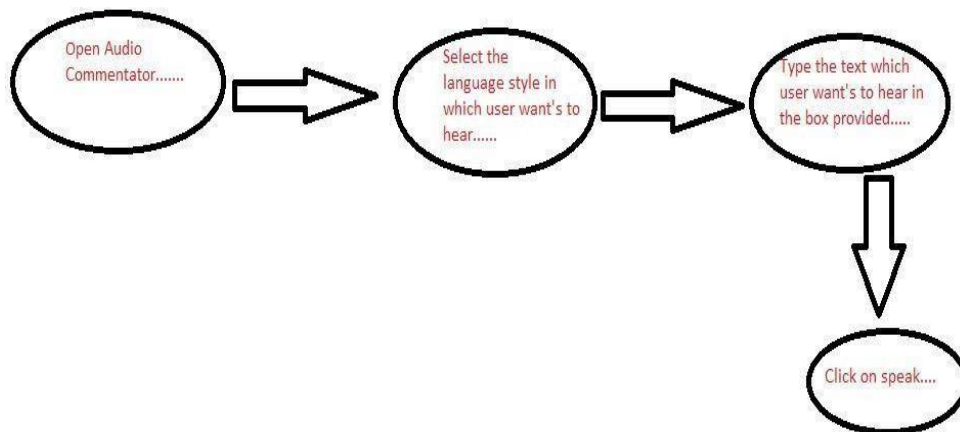


Fig 2.1
PROCESS OF AUDIO COMMENTATOR

2.1 SYSTEM ARCHITECTURE

We have a very simple system architecture. When user opens the “Audio commentator” there will be a select voice so that user need to select in which voice he/she want to hear.

After selecting the voice, the user needs to enter the text which he/she wants to hear in the box provided.

2.1 CODE SNIPPETS

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <meta http-equiv="X-UA-Compatible" content="ie=edge">
  <title>Document</title>
<style>
body{
text-align:center;
line-height: 50px;
display: flex;
justify-content: center;
align-items: center;
background-image: url('img.JPG');
background-repeat: no-repeat;
background-attachment: fixed;
background-size: cover;
font-size: 1.875em;
color:#ffffff
}
</style>
</head> <body>
```

```

<div>
  <form>
    <br>
    <br>
    <label>TEXT-TO-SPEECH CONVERTER</label><br>
    <br>

    <label>Select Voice:</label>
    <select id='voiceList'></select> <br><br>
    <label>Enter text:</label>
    <input id='txtInput' /> <br><br>
    <button id='btnSpeak'>Speak!</button>
  </form>
</div>

<script>
  var txtInput = document.querySelector('#txtInput');
  var voiceList = document.querySelector('#voiceList');
  var btnSpeak = document.querySelector('#btnSpeak');
  var synth = window.speechSynthesis;
  var voices = [];

  PopulateVoices();
  if(speechSynthesis !== undefined){
    speechSynthesis.onvoiceschanged = PopulateVoices;
  }

  btnSpeak.addEventListener('click', ()=> {
    var toSpeak = new SpeechSynthesisUtterance(txtInput.value);
    var selectedVoiceName = voiceList.selectedOptions[0].getAttribute('data-name');
    voices.forEach((voice)=>{
      if(voice.name === selectedVoiceName){

```

```

        toSpeak.voice = voice;
    }
});
synth.speak(toSpeak);
});

```

```
function
```

```

    PopulateVoices(){ voices =
    synth.getVoices();
    var selectedIndex = voiceList.selectedIndex < 0 ? 0 : voiceList.selectedIndex;
    voiceList.innerHTML = "";
    voices.forEach((voice)=>{
        var listItem = document.createElement('option');
        listItem.textContent = voice.name;
        listItem.setAttribute('data-lang', voice.lang);
        listItem.setAttribute('data-name', voice.name);
        voiceList.appendChild(listItem);
    });

```

```

    voiceList.selectedIndex = selectedIndex;

```

```

    }

```

```

</script>

```

```

</body>

```

```

</html>

```

CHAPTER 3

EXTERNAL INTERFACE REQUIREMENTS

3.1 USER INTERFACE

Any popular OS that will allow the use of a browser to view and access web pages.

3.2 HARDWARE INTERFACE

Any kind of internet connection like WIFI, modem data etcetera, to allow the browser interfaces to connect to the website. The website can be accessed through any devices like mobile, computer, laptop, tablet, etc.

3.3 SOFTWARE INTERFACE

Some of the software interfaces which you can use to access our website are

- Opera
- Google chrome
- Mozilla Firefox
- Apple Saf

CHAPTER 5

FUTURE ENHANCEMENT

- In the future, I will try to develop the project as an app which is suitable for the all the androids.
- If this project is inserted in the mobile, we can give access to any app such as mail.
So that when user receives any mail, he gets a voice message so that he listens, what message he has got in the mail.
- We can also insert this project in virtual spectacles which will be useful for the vision less persons.

CHAPTER 6

CONCLUSION

This software project is a windows-based software that reads a text file to the user. The bot reads a text file and associated pronunciations in its temporary database. The bot then reads an entire word to the user. The pronunciations of articles and basic words have been fed to the bot, the rest of the words and complex ones are calculated and read accordingly. The bot can be effectively used to help read the text document for the user so that the user does not constantly need to look at the screen and read the entire document. Text to speech converter is a recent software project that allows even the visually challenged to read and understand various documents.

CHAPTER 7

SCREENSHOTS

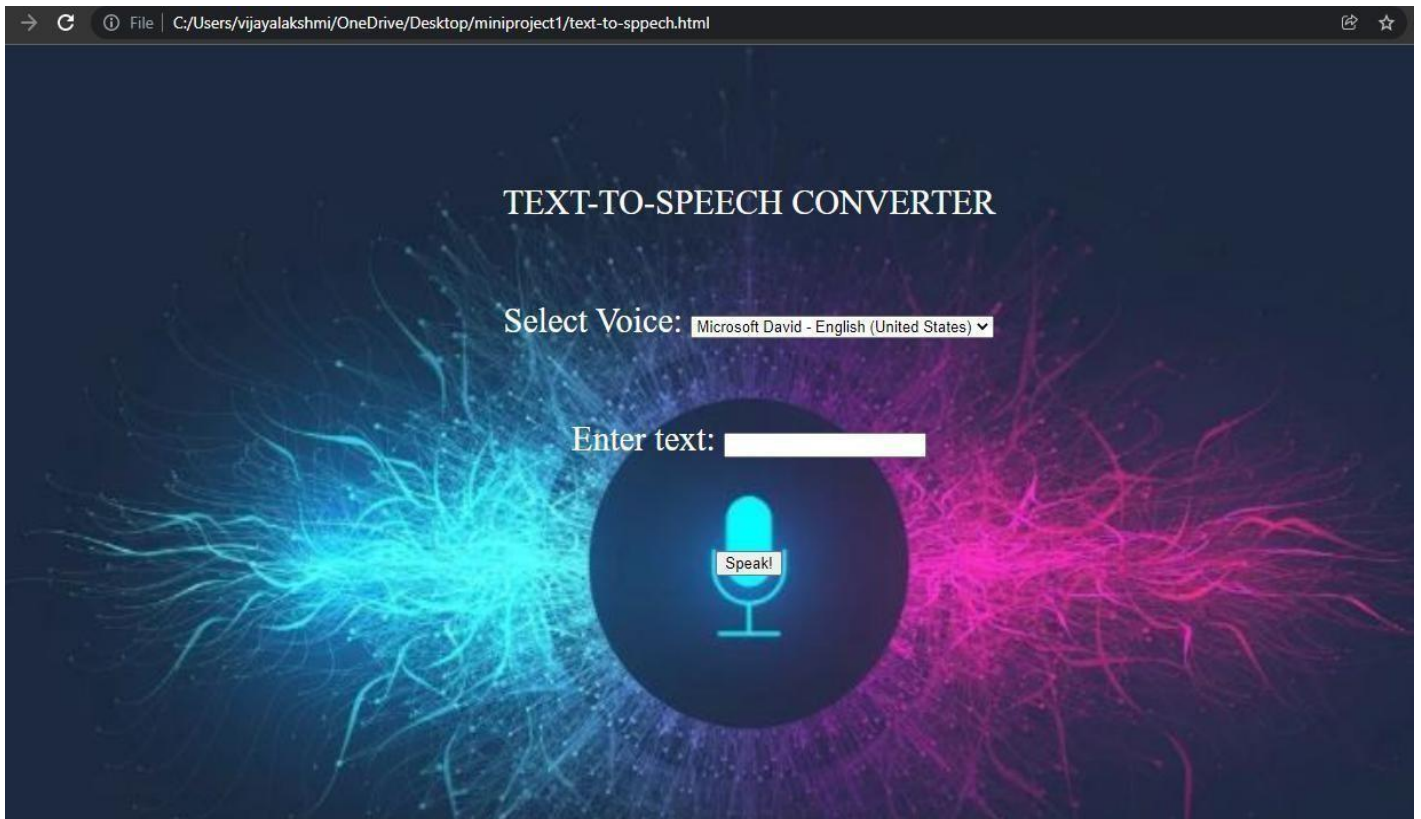


Fig 6.1
Main page of Audio Commentator

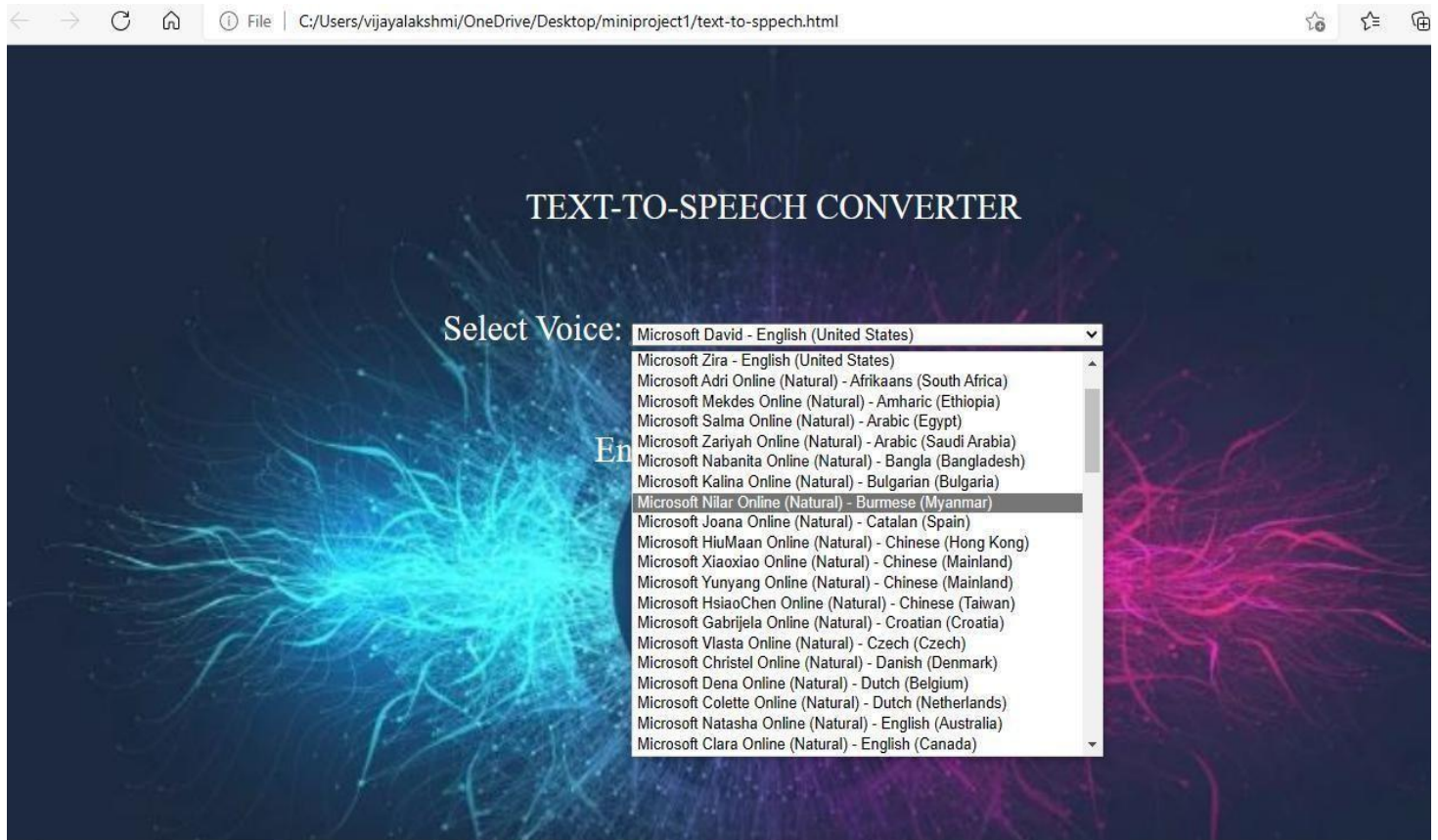


Fig 6.2
List of Voice's