MICRO PROJECT

SONIC

A Real-time Speech Services Platform

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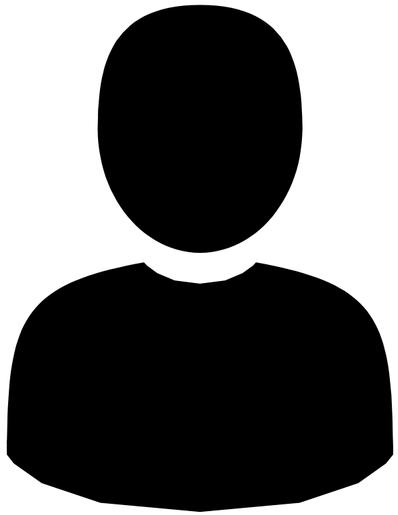

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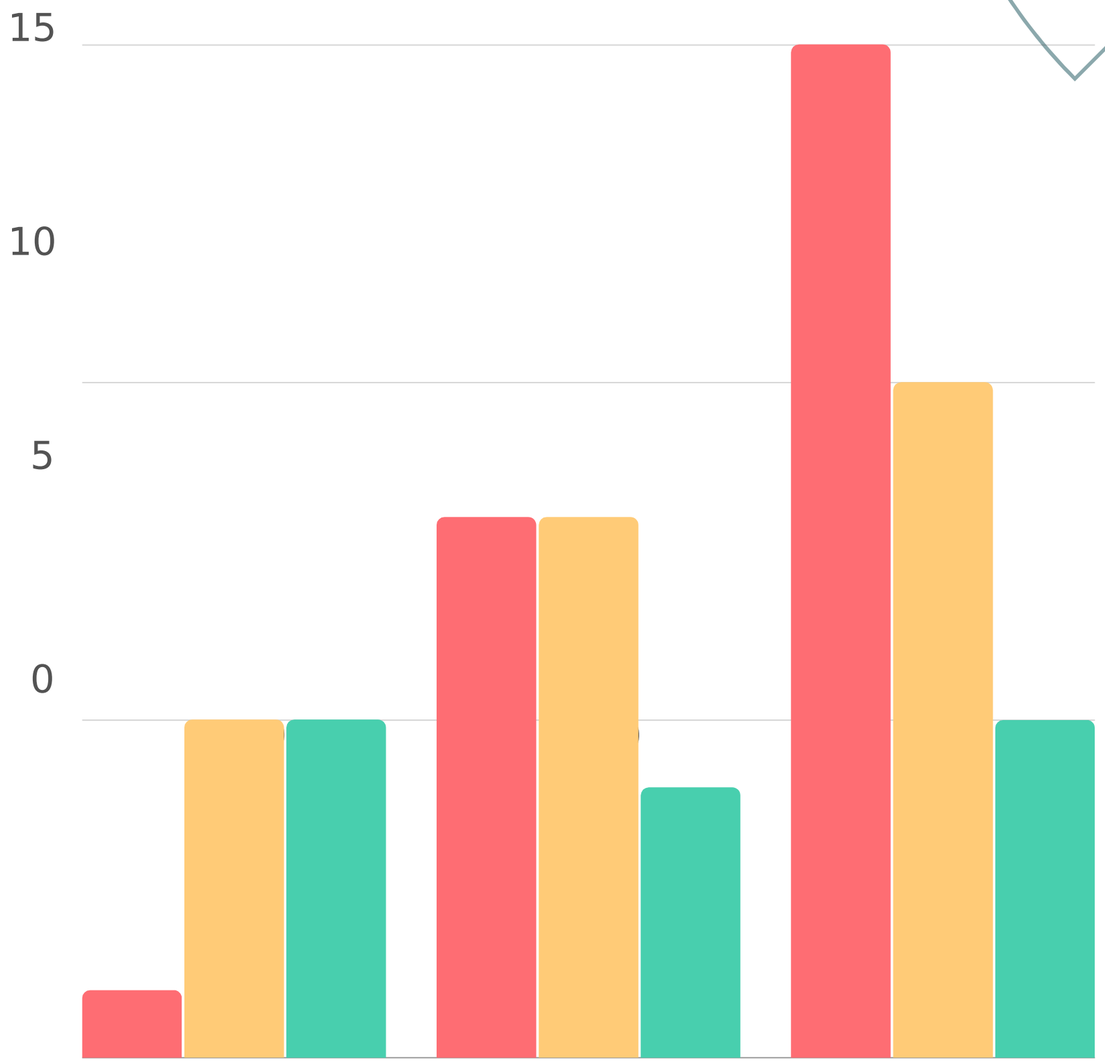
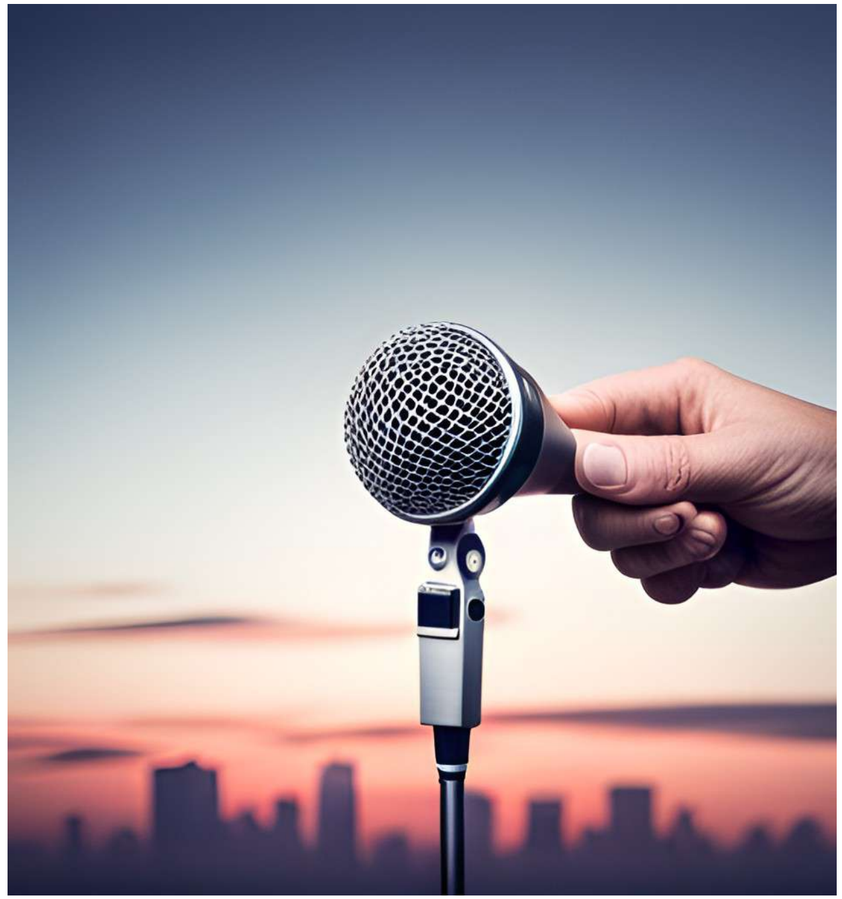


PROBLEM STATEMENT:

- The problem being addressed by the "Sonic" is the need for speech services, specifically real-time speech-to-text and text-to-speech conversion.
- This can be beneficial for individuals who require assistance in converting spoken words into written text or vice versa.
- This can benefit individuals who have difficulties with typing, require quick transcription of spoken words, prefer auditory communication, or have other accessibility needs related to speech and language processing.
- The website aims to enhance communication and accessibility by providing these speech services in a user-friendly and convenient manner.

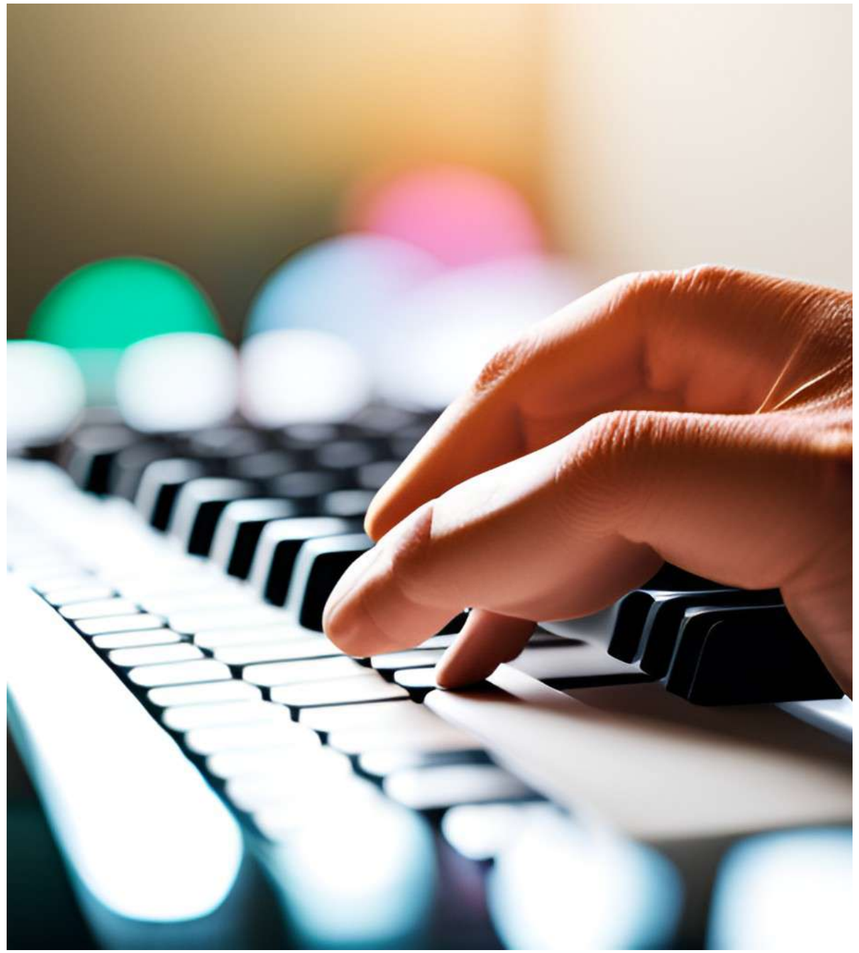
ABSTRACT:

- "Sonic" is a user-friendly web platform powered by Azure Cognitive Services, offering real-time speech-to-text and text-to-speech conversion.
- It addresses accessibility and communication needs, benefiting those with typing challenges, hearing impairments, speech impediments, and anyone seeking efficient speech services.
- This project bridges the gap in communication and fosters inclusivity, enhancing user experiences.



INTRODUCTION:

- "Sonic" is a pioneering web-based solution designed to revolutionize speech services, with a focus on real-time speech-to-text and text-to-speech conversions.
- By harnessing the power of Azure Cognitive Services, this user-friendly platform offers a lifeline to individuals facing barriers in communication.
- It caters to a diverse audience, including those with typing difficulties, hearing impairments, speech impediments, or anyone seeking a streamlined and efficient speech service. "Sonic" bridges the accessibility gap, prioritizing inclusivity and convenience for all.



OBJECTIVES:

Improve accessibility for people with a range of needs, such as speech and hearing impairments.

de real-time efficiency through speech-to-text
d text-to-speech services.

e a user-friendly experience for streamlined
mmunication and accessibility.

TECHNOLOGIES USED :

HTML

- CSS
- JAVA SCRIPT

MICROSOFT AZURE:

- **HTML:** HTML is a markup language used for structuring content on the web.
- **CSS:** CSS is a styling language that enhances the presentation and layout of web content.
- **JAVASCRIPT:** JavaScript is a versatile programming language for creating dynamic and interactive web applications.

SERVICES USED :

- Cognitive Services
- Web Services

Cognitive Services:

Azure Cognitive Services Text-to-Speech and Speech- to-Text are powerful AI-driven tools. Text-to-Speech allows the conversion of written text into natural-

SERVICES USED :

- Cognitive Services
- Web Services

sounding spoken language, enabling auditory communication for various applications, including assistive technology and interactive user interfaces.

- On the other hand, Speech-to-Text provides the capability to transcribe spoken words into written text in real–time, facilitating quick and accurate transcription for a wide range of use cases, such as transcription services, voice assistants, and more.
- Both services leverage cutting-edge AI technology, making them invaluable for enhancing accessibility, communication, and user experiences across digital platforms.

Web Services

- Static web apps, a part of Microsoft Azure, offer a simplified and scalable solution for web application deployment.

These apps are well-suited for content-focused websites and single-page applications, providing a secure and cost- effective hosting environment.

With built-in continuous integration and deployment, developers can easily maintain and update their applications.

- Static web apps are designed to ensure high performance and global reach, making them an ideal choice for businesses and developers looking for a hassle–free, serverless hosting solution for their web projects.

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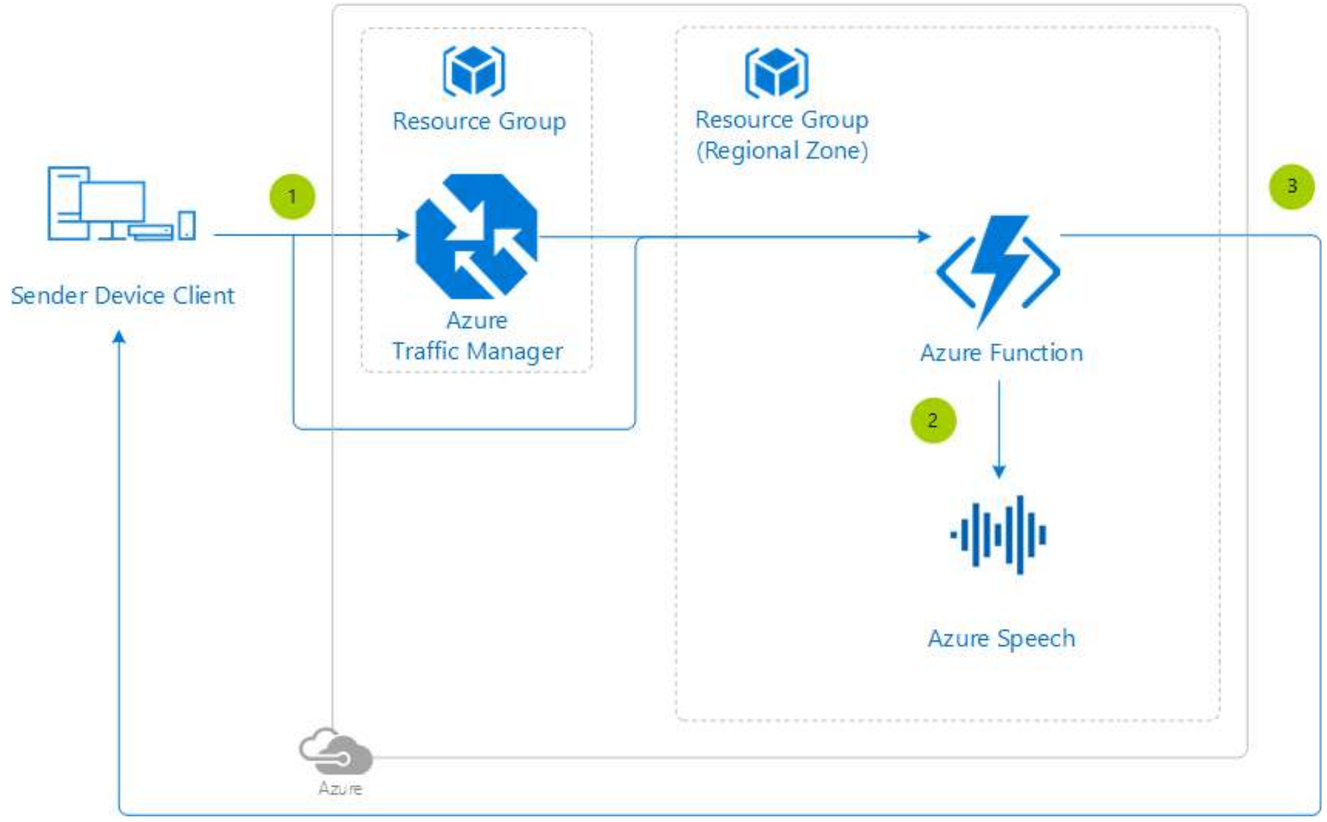
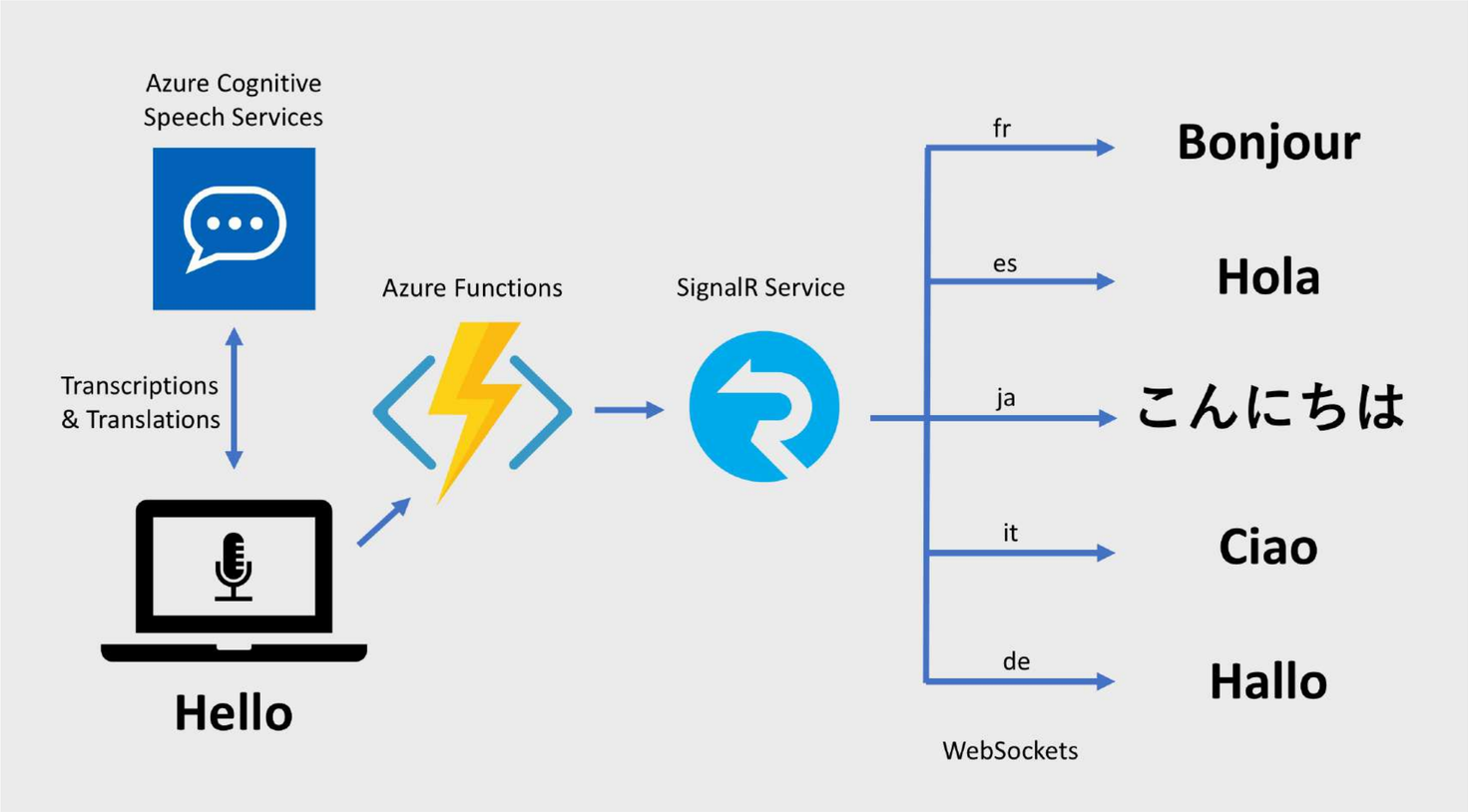
TEXT-TO-SPEECH METHODOLOGY:



SPEECH-TO-TEXT METHODOLOGY:



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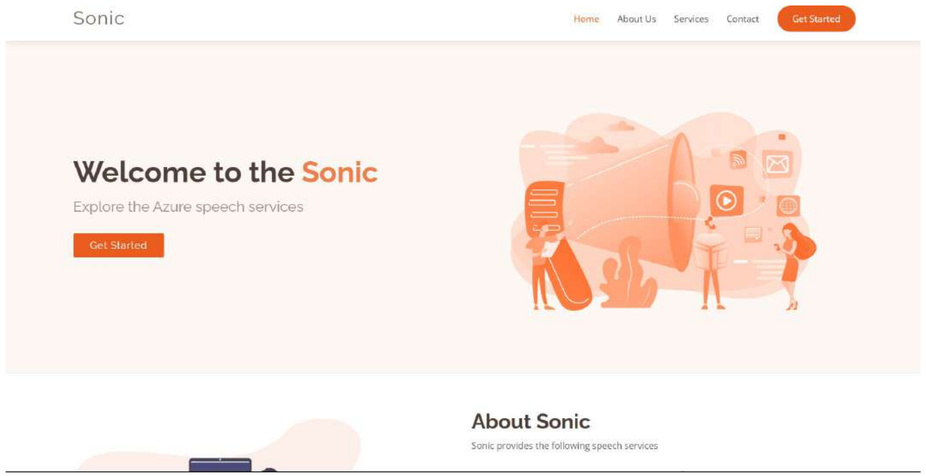
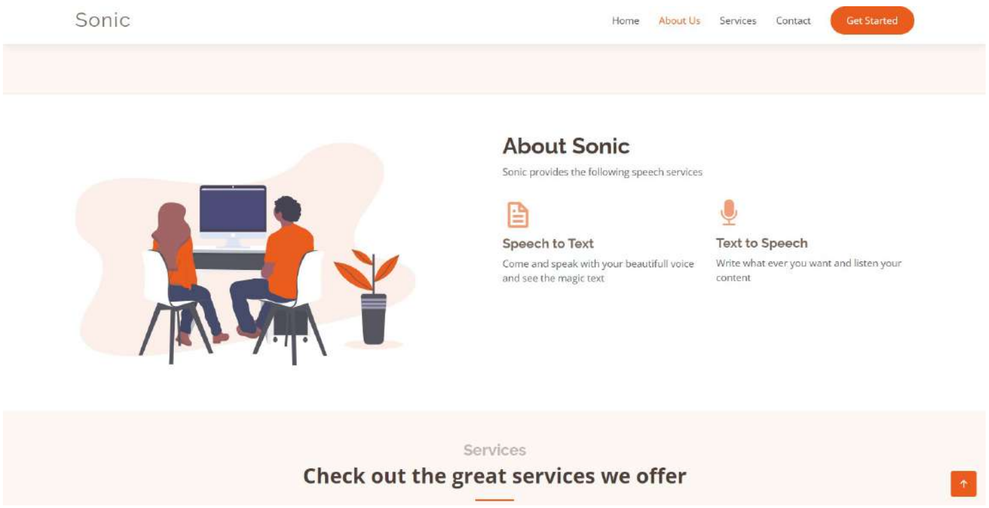
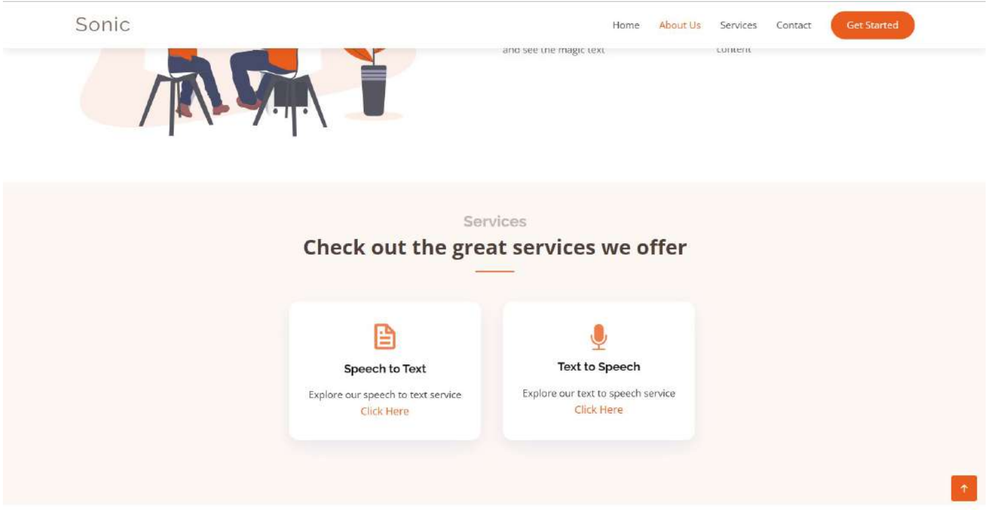


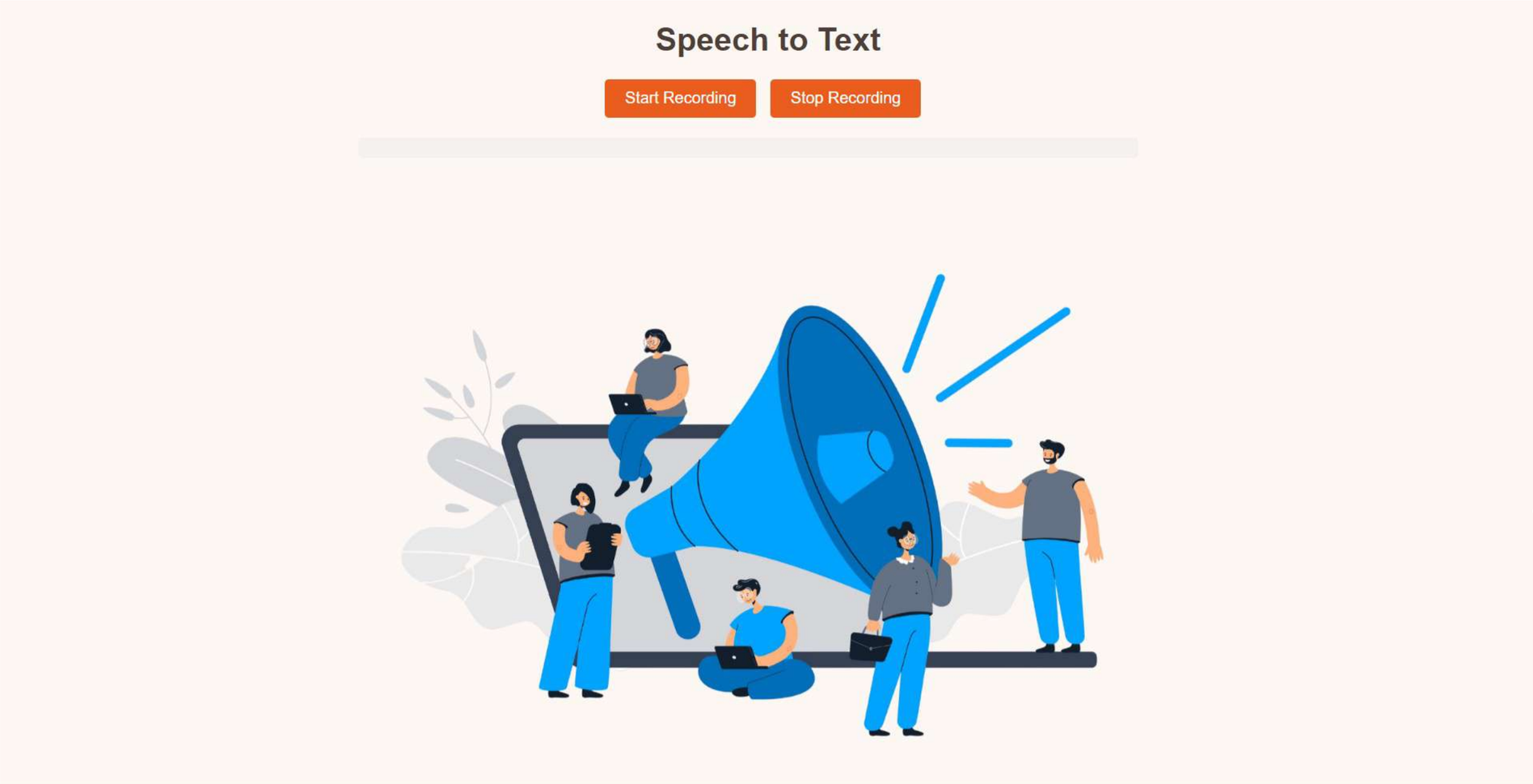




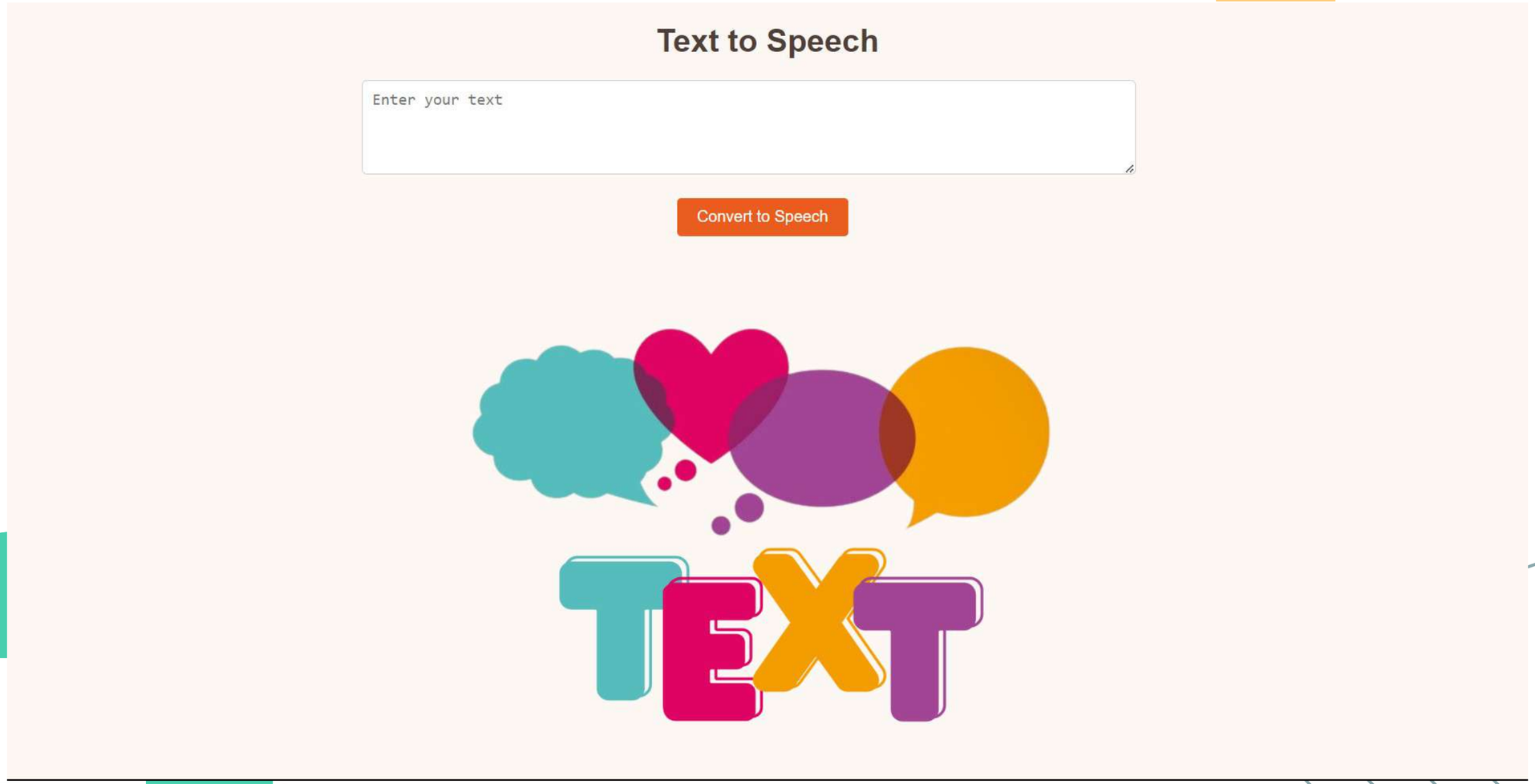
LINK:

https://black-field-01efa7010.3.azurestaticapps.net

SPEECH TO TEXT



TEXT TO SPEECH



CONCLUSION:

- In conclusion, "Sonic" represents an innovative solution to address the pressing need for real-time speech services, offering both speech-to-text and text-to-speech capabilities.
- With an emphasis on accessibility, user-friendly design, and the integration of Azure Cognitive Services, this platform stands at the forefront of enhancing communication, inclusivity, and efficiency for a diverse user base.
- As technology continues to evolve, "Sonic" remains committed to breaking down communication barriers and providing a seamless, accessible experience for all.

FUTURE SCOPE:

- The future scope of "Sonic" envisions advanced AI integration for improved accuracy, expanded multilingual support, and the development of mobile applications to enhance accessibility on various devices.
- Customization options, third-party integration, and potential applications in education and healthcare further extend its
- potential. User analytics and enhanced security measures will play a crucial role in shaping the platform's growth, while global partnerships can promote its widespread adoption as a tool for fostering inclusivity and accessibility on a global scale.

THANK YOU

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