EXTRACTING TEXT FROM IMAGE AND BRAILLE TO SPEECH CONVERSION

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The study presents a technique for extracting text from photographs and converting Braille dots to text, allowing visually challenged people to read printed items independently. It examines existing technologies like as optical character recognition (OCR) and text-to-speech conversion, which are used to digitize written texts and turn them into audio.The suggested system is intended to extract text from photos using OCR and convert Braille dots into text characters. It will then translate the text and synthesize voice to produce audio output. The implementation details cover how to create modules for Braille-to-text and text-to-Braille conversion and integrate them with OCR, translation, and text-to-speech capabilities.Testing was conducted to validate the accuracy and performance of the various modules. The system is designed to work on both Android and iOS systems.

Conversion of Hindi Braille to Speech using Image and Speech Processing

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This research proposes a system to convert Hindi Braille images into spoken Hindi using image processing, deep learning and text-to-speech techniques.Firstly, Preprocessing and segmentation of Braille images to isolate characters is done.Then Braille character recognition is done using two methods:
Conventional Approach which Converts character to binary sequence and maps binary sequence to corresponding Hindi letter .And there is Deep Learning Approach which Uses Convolutional Neural Network (AlexNet) trained on a dataset of Braille images.Out of two methods , conventional approach was found to be more accurate than deep learning approach.For conversion of text to speech, concatenative speech synthesis is implemented, where the vowel and consonant combinations in every word is mapped to its corresponding audio files from a speech corpus.

Braille Text to Speech Conversion

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This paper presents a flexible and real-time Braille to text and audio conversion system.The system works in three steps :The user uploads a scanned image of a Braille document.Python libraries are used to recognize the individual Braille dots in the image.Based on the dot patterns, the Braille letters are converted into their corresponding English alphabets.The converted letters are displayed as text.For Text to Speech Conversion:The converted text is fed into Google

Text-to-Speech (GTTS) which transforms the text into spoken language.The system is tested for Sample braille text and has shown correct output for the braille text.