

Product Reading For Blind Person Using IOT

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Abstract- This project is based on the text to speech conversion using the concept of IOT (Internet of things) in which we can transmit the message or text in efficient manner. We will achieve an efficient in which we can distortion free communication using Internet as a medium so that there is no restrictions on the distance. The system will convert text data into the speech from anywhere. We are using the Raspberry Pi Module to decode the data as well as convert into the speech signal. The Raspberry Pi module is a latest embedded module which behaves ARM 64bit processor. This will make the operations faster. This text to speech conversion system makes the data information/ data transmission easier. Usable technology presence expands for the optically effective sociality in procedure to aware positively. Here already state this activity performance submit a camera based dependable content learning structure through support unsighted human learn content stamp also wrap in distinction to an old item there regular activity. Latest here submit job brand stamp are clean also type are known apply OpenCv.

Keywords- iot, audio, openCv, Raspberry Pi, Camera

I. INTRODUCTION

The project is based on the IOT concept. IOT Definition: The term Internet of Things generally refers to scenarios where network connectivity and computing capability extends to objects, sensors and everyday items not normally considered computers, allowing these devices to generate exchange and consume data with minimal human intervention. There is, however, no single, universal definition. Text to speech (TTS) conversion transforms linguistic information stores as data or text into speech. It is widely used in audio reading devices for blind people in last few years, however used of text to speech conversion technology has grown far beyond the disabled community to become a major adjunct to the rapidly growing use of digital.

II. LITERATURE SURVEY

[1] Wearable Obstacle Avoidance Electronic Travel Aids for Blind: A Survey 1) Electronic travel aids (ETAs): devices that transform information about the environment that would normally be conveyed through next sensor level.

2) Electronic orientation aids (EOAs): devices that provide orientation prior to, or during the travel. They can be external to the user and/or can be carried by the user (e.g., infrared light gives services to the receivers).

3) Position locating device (PLDs): added technology generation like General pocket service, contain European Geostationary Navigation Overlay Service (EGNOS)

[2] Context-based Indoor Object Detection as an Aid to Blind Persons Accessing Unfamiliar Environments

Strong and powerful indoor commodity detection can help people with severe vision impairment to independently access unfamiliar indoor environments. Copy otherwise, or republish, to post on servers or to redistribute to lists, requires prior specific permission fee.

vision to independently find doors, rooms, elevators, stairs, bathrooms, lift and other building amenities in unfamiliar indoor environments. Computer vision automation has the future to assist blind individuals to individually access, understand, and explore such environments.

[3] Automatic Detection and Recognition of Signs From Natural Scenes

In this paper, we propose an approach for automatic detection and recognition of text from natural scenes. The proposed approach embeds multi resolution and multi scale edge detection, adaptive searching, color analysis, and affine rectification in sign detection. Parallel with the existing text find method, this new framework can improved handle the dynamics of text detection in natural scenes. Rather of using only binary information as most other OCR systems, we extract features from the intensity image directly, and avoid potentially losing information during the binarization processing, which is irreversible. We propose a parish depth normalization approach to effectively handle glow variations of the captured character image. We then apply a Gabor transform to obtain local features and an LDA method for feature selection. We have successfully applied the proposed approach to a Chinese-English sign translation system, which can automatically detect and recognize Chinese signs captured from a camera, and translate there cognized text into English.

[4] Portable Camera-Based Assistive Text and Product Label Reading From Hand-Held Objects for Blind Persons

This number is increasing rapidly as the baby boomer generation ages. Recent developments in computer vision, digital camera, and portable computers make it feasible to assist these individuals by developing camera-based products that combine computer vision technology with other existing commercial products such optical character recognition (OCR) systems.

III. EXISTING SYSTEM

- 1) Braille display
- 2) Manually find objects
- 3) Use only simulation Platform

IV. PROPOSED WORK

- 1) OpenCV technology based process
- 2) Camera-base assistive text reading framework an audio along with Raspberry Pi.

OPTICAL SCANING

A device that can read text or illustrations printed on paper and translate the information into a form the computer can use.

An optical scanner is an input device using light beams to scan and digitally convert images, codes, text or objects as two-dimensional (2D) digital files and sends them to computers and fax machines. Flatbed check analysis accessory are the most famous optical scanners. Optical scanners are used for many purposes, including reading customized response forms, creating automated data fields and recording fingerprints.

LOCATIONSEGMENT

Finding an office or a room in a large public building, such as a university, a city hall or a shopping center, is often difficult for normal persons. For blind persons it is far more difficult because they must completely rely on people passing by to ask for information. Even when a building is becoming more familiar, they need to memorize all locations for moving about.

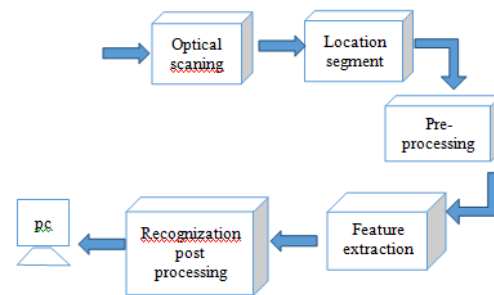
PREPROCESSNG

Process that function reogonized the text to audio convetor.

RECOGNIZATION POST PROCESSING

The techniques of image deal with have used in optical character recognition (OCR) for a long time. That "pattern recognize" to "feature extracts" recently. Recognize the text. Using wording picture to assist the OCR arrangement in improving document recognition rate is the argument of various recent researches.

V. ARCHITECTURE



VI. RESULT



VII. CONCLUSION

The project is overall done. This system to read printed , text on hand-held objects help to the blind peoples.

Blind peoples simply shake the products or any document in-front of the camera , project has to read and telecasting to the blind persons like audio output .this process makes better to the blind peoples. Detecting edge process of in-front of the camera. This Project I'm using OCR technique and using a software text-to-speech convertor is used to perform word recognized text-to-audio to the blind person users.

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