Vision based Text Recognition using Raspberry Pi

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Abstract
Human communication today is mainly via speech and text. To access information in a text, a person needs to have vision. However, those who are deprived of vision can gather information using their hearing capability. The proposed method is a camera-based assistive text reading to help blind persons in reading the text present on the text labels, printed notes, and products [1]. The proposed project involves text extraction from images and converting the text to speech converter, a process which makes blind persons read the text. This is the first step in developing a prototype for blind people recognizing the products in real-world environments, where the text on the product is extracted and converted into speech. This is carried out by using Raspberry Pi, where portability is the main aim which is achieved by providing a battery backup and can be implemented as a future technology. The portability allows the user to carry the device anywhere and can use any time.

References

- Portable Camera Based Assistive Text and Product Label Reading From Hand-Held Objects For Blind Persons. Chucai Yi, Student Member IEEE, Yingli Tian, Senior Member, IEEE, and Aries Arditi.
- The watershed algorithm is a classic algorithm used for segmentation and is especially https://www.pyimagesearch.com/
- Short-term connection problems might affect your updatescode. google. com

Index Terms

Computer Science Pattern Recognition

Keywords

Image Acquisition Image Pre-processing Black-hat Transformation Dilation Operation Otsu
Vision based Text Recognition using Raspberry Pi

Thresholding

Bounding Boxes

Tesseract Ocr Engine

Spell Corrector

Festival Tts Engine