

“MySight” - A Mobile based Solution for the blind community

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Reading is an ultimate goal of human beings which is unfortunately not available for people affected by blindness. They can only read things which are in Braille system. But we all know that every book has not been converted to Braille system. The main problem of blind people for studying is that they cannot read and learn from textbooks. Therefore, it would be extremely useful to find a method, such that a blind person could read newspapers, textbooks, bills, etc. without the Braille system. Android platform can be used to enable this opportunity for blind people for the purpose of reading out loud any printed document or anything written using a standard font. This research is completely focused on finding a way which could let blind people be exposed to a new kind of reading. The main objective of this research was to develop an android application which could identify words and various kinds of symbols written using a standard font in a given document, and then convert them to an audible format such that a blind person could understand. It will be effective for a blind person by providing voice notifications and smart touch techniques. The first step was to find an appropriate and efficient Optical Character Recognition (OCR) technique which compatible with the Android platform. In order to fulfill that requirement, the Tesseract OCR library was used. After lying dormant for more than 10 years, Tesseract is now behind the leading commercial engines because of its accuracy. The next step was interface designing. In this application, there are two main interfaces. One is for capturing the text, and another one is for displaying the detected text. There are several operations that can be performed once it detects the text, such as, ‘read again’ function. Then, the OCR implementation for the Android platform has been successfully completed. For the future improvements, the application should be enhanced to guide the blind person to capture the image of the paper or the page of a book. For that, the OpenCV library can be used for paper detection and the smart voice commands for giving instructions to the blind.

Keywords: Text-to-Speech, Blind community, OCR, Android, Tesseract