Title: An Android Optical Character Recognition Converter App with Image Perspective Rectification Algorithm Based on Tesseract-Leptonica Technique

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EXECUTIVE SUMMARY

Optical character recognition (OCR) technology has already been used for many years in converting documents or printed text into an editable text. It is one of the most used and popular methods in various paperwork applications today. It can be implemented in software and even in android applications using Tesseract engine. It is one of the best and most accurate open source tool engines for OCR. It has high accuracy recognition percentage when it comes to converting document images that have a plain background and in correct perspective position. However, images that were captured manually using handheld cameras often suffers from perspective distortions which result to poor OCR accuracy output. It is necessary to rectify the image first before an OCR attempt to maintain its high accuracy. Leptonica's image processing libraries are best suited for image rectification. It is also open source, so everyone can use it in dealing with images. With the implementation of OCR using Tesseract and Leptonica's Image Perspective Rectification Algorithm in android devices, the researchers provide an innovation to the traditional and manual method of copying or editing document contents using computers and laptops. With the completion of this study, the application of both algorithms may open new opportunities for future innovations.

Keywords: Image Processing, OCR, Leptonica, Android Application