

**DESIGN AND INNOVATION OF HANGUL AND ENGLISH
TEXT DETECTION TO FOOD MENU USING OCR (OPTICAL
CHARACTER RECOGNITION) METHOD**

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ABSTRACT

Korean language has a different form of characters from the Latin alphabet, as the consequence, not everyone can read Korean characters. The numbers of Muslims in Korea, who are the minority, find it is hard when it comes to distinguish halal and non-halal food. As a result, foreign tourists, especially Muslim tourists who come to Korea, have difficulty in choosing halal food.

Based on the problem, the topic of this research is based on the image processing system (Image Processing) that is designed to detect alphabet and Hangul letters (Korean characters) using the OCR (Optical Character Recognition) and Raspberry Pi methods as data processing with the purpose of it can recognize Hangul and alphabet that are already available in the data base. The mechanism of this system is firstly to create a data base of food data and certain words related to food menus. Then, by using the Pi camera, scanning of the food menu is performed. The data obtained will be processed by Raspberry Pi with the purpose of the system will be able to detect food menus correctly.

The experimental results showed that the system is able to detect food menus from text localization with an average accuracy rate of 88,333%. By using 4 different font types, the English text shows OCR data train still needs to be improved.

Keywords: Raspberry Pi, OCR (Optical Character Recognition), text localization.