ABSTRACT

The process of learning to read and write the Qur'an using braille is needed by Muslim people who is blind, which is one of the inscriptions on the Qur'an is arab letters with punctuation.The result of braille Quran with punctuation wrote by blind people will be corrected manually making it difficult for someone who does not know braille letter.

From this problem, we designed a braille to arab letters with punctuation convertion.The input data is .jpg file from scanned braille script created using reglet, so the script have dots in the corner. Then this file is segmented then generate pixel values that are used as features of a braille character. These features are extracted using mean of region of pixels and classified using K-Nearest Neighbor (KNN) method. The system output is arab letters with punctuation.

This system has 100% maximum accuracy by using 392 pairs of braille characters consisting of the braille of arab letter and the braille of the punctuation, the distance value of segmentation (c) is 100 pixels, the distance value of segmentation (d) is 15 pixels, the features type is Binary Features, KNN distance is Euclidean, and the value of neighbor (k) = 1.

Keywords : Braille, Arab letters, Punctuation, mean of region of pixels, K-Nearest Neighbor