

ABSTRACT

The recognition of handwriting numbers is one of the most studied patterns of recognition pattern that is also included in character recognition. However, the problem is the number of handwriting made by humans are different, hence made a system that is able recognize handwriting numbers. The offline handwriting recognition system is expected to help people in entering data into a computer quickly and effectively. The recognition system uses features from the extraction of a star layered histogram and is trained by using artificial neural networks. After the first stage of preprocessing will be determined the center of gravity (Center Of Gravity (COG)). This COG will be used to create a histogram, the first point that touches the character will represent the first layer of the histogram, if the line extension has not reached the boundary, the next point will represent the second layer of the histogram. This process will be restarted until the line touches the boundary of the character. After normalization, this feature will be used to train artificial neural networks. This method achieves 93% accuracy results using a MINST database.

Keywords: *Handwritten Number, OCR, Stralayered Histogram, Recognition, K-Nearest Neighbor*