

## Arabic Handwritten Names Recognition by Using Holistic Approach

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### Abstract

Designing Computerized Systems which possess reading and hearing faculties is an active research area for more than four decades. Many methods and algorithms have been suggested by researchers for this purpose as part of pattern recognition research. Recently, more research work has been devoted to the holistic approach the recognition system recognizes a complete word as one object without going through the long and erroneous character segmentation process. In this paper, a probabilistic neural network has been designed to recognize the popular Arabic names holistically. SUSst ARG names data set has been used to test the network performance (collected and compiled by pattern recognition research in Sudan University of Science and Technology-SUSst). Selecting an appropriate threshold for rejection has been investigated. With a threshold value which rejects 34% of the testing data the network attains less than 1% error rate.

**Key words:** Arabic pattern Recognition, holistic approach, probabilistic neural network.