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2019 7th International Conference on Mechatronics Engineering, ICOM 2019
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Recognition of Isolated Handwritten Arabic Characters (Conference Paper)

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Abstract

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The challenges that face the handwritten Arabic recognition are overwhelming such as different varieties of handwriting and few public databases available. Also, teaching the non-Arabic speaker at the young age is very difficult due to the unfamiliarity of the words and meanings. So, this project is focused on building a model of a deep learning architecture with convolutional neural network (CNN) and multilayer perceptron (MLP) neural network by using python programming language. This project analyzes the performance of a public database which is Arabic Handwritten Characters Dataset (AHCD). However, training this database with CNN model has achieved a test accuracy of 95.27% while training it with MLP model achieved 72.08%. Therefore, the CNN model is suitable to be used in the application device. © 2019 IEEE.

SciVal Topic Prominence ⓘ

Topic: Character recognition | Optical character recognition | Digit recognition

Prominence percentile: 86.782 ⓘ

Author keywords

Arabic Database character recognition CNN Handwriting Recognition MLP

Indexed keywords

Engineering controlled terms: Database systems Deep learning Multilayer neural networks

Engineering uncontrolled terms: Arabic characters Arabic database Convolutional neural network Hand-written characters Handwriting recognition Learning architectures Multilayer perceptron neural networks Python programming language

Engineering main heading: Character recognition

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