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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

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