Universiti Teknologi MARA

Identification of Tajwid Using Artificial Neural Networks

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DECLARATION

I certify that this thesis and the research to which it refers are the product of my own work and that any ideas or quotation from the work of other people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline

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ABSTRACT

Al-Quran is the most important book in Muslims' life as it gives knowledge in many areas for the use of their daily life. Therefore, it is needed to be read properly so the meaning of the reading is correct. In addition, learning *tajwid* is a must in order to improve better reading. The main purpose of the project is to train artificial neural network (ANN) data to identify the *tajwid*. It is also trying to classify the *tajwid* based on letters and signs by defining their shape and location. Images are used as samples to be processed for the used of classification. In order to have a system which has an ability to learn, back-propagation learning algorithm is used. The results of the experiments done shows that the accurate results produced by the prototype is 20%. From the accurate results, 60% results are *Mad Asli* and 40% is *Ikhfa' Haqiqi*. From the identification of Mad Asli, 40% accurate results are from the letter *alif* (ا), 40% is from the letter *wau* (و) and 20% is from the letter *ya* (ي). As conclusion, it is hope that this project can be the starting point for a better learning of *tajwid*.

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