

ملخص البحث رقم (٤)

السيد الأستاذ الدكتور/ مقرر اللجنة العلمية الدائمة لترقية الأساتذة والأساتذة المساعدين للحاسبات
والمعلومات

تحية طيبة وبعد - احيط سيادتكم علما بان البحث رقم ٤ ، بياناته كالتالي:

عنوان البحث باللغة الانجليزية:

A new model for early diagnosis of Alzheimer's disease based on BAT-SVM classifier

مكان النشر وتاريخه:

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اسماء المشاركين في البحث:

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ملخص البحث باللغة الانجليزية :

Magnetic resonance images (MRI) of the brain is a significant tool to diagnosis Alzheimer's disease, for this reason we use it to measure regional changes in the brain that reflect disease progression to detect early stages of the disease. In this paper, we propose a new model that adopts Bat for parameter optimization problem of support vector machine (SVM) to diagnose Alzheimer's disease via MRI biomedical image. The proposed model uses MRI for biomedical image classification to diagnose three classes; normal controls (NC), mild cognitive impairment (MCI), and Alzheimer's disease (AD). The proposed model based on segmentation for the most involved areas in the disease hippocampus, the features of MRI brain images are extracted to build feature vector of the brain, then extracting the most significant features in neuroimaging to reduce the high dimensional space of MRI images to lower dimensional subspace, and submitted to machine learning classification technique. Moreover, the model is applied on different datasets for efficiency validation, it concluded that the new Bat-SVM model achieved acceptable level of accuracy reached to 95.36% using maximum number of bats equal to 50 and number of generation equal to 10.