An analysis on SVM and BPNN for CT Patient Table Detection using Distance-verses-angle Signature Feature

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Abstract: Biomedical imaging plays an essential role in analyzing and diagnosing diseases related to the brain. There is a considerable variation in brain medical datasets, such as... **View more**

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Abstract:
Biomedical imaging plays an essential role in analyzing and diagnosing diseases related to the brain. There is a considerable variation in brain medical datasets, such as some CT scan datasets containing a patient table along with the brain object, whereas others only have the brain. In the first said category, the worthless undesirable tables are needed to be removed for further processing. On the other hand, no such removal techniques are required to be applied for the second case. This article has computed the classification performance of the Support Vector Machine(SVM) and Back Propagation algorithm(BPNN). The proposed method has been trained with 661 images and tested with 165 images. And the performance matrices show that both classifiers have the almost same level of accuracy, i.e., for SVM, average accuracy is 98.58% and for BPNN, it is 98.11%.

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