

Regarding the performance of KNN and decision tree classifiers in Figure 5, it can be considered that with regard to the speed of these two classifiers that have for data training and testing, they can be utilized for datasets. Besides, larger ones will also be used. These classifiers have been used with the 10-K-fold validation model.

5. CONCLUSION

In this study, we propose a classification method for grasshopper optimization based on grasshopper optimization. The proposed method is mathematically modeled and imitated the behavior of grasshoppers in nature to solve optimization problems. The k-Nearest Neighbor Classifier (KNN) and its results then evaluated the reduced data obtained from these methods. Then the proposed method was compared with other methods based on genetic algorithm, particle swarm and ant lion optimization (Alo). The results show that the proposed method is capable of diagnosing diseases in three low, medium and high states, and its quantitative performance results are very close to the optimum Particle Swarm Optimization (PSO) and the KNN classification performs best among the classes. It has different clauses. It should be noted that the method of diagnosis of lung cancer by Grasshopper Optimization Algorithm (GOA) has not been investigated. In the future, we will also use this method to detect breast cancer.

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