

## Prediction of Bariatric Surgery Publications by Using Different Machine Learning Algorithms

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**Abstract :** Identification of relevant publications based on a Medline query is time-consuming and error-prone. An all based process has the potential to solve this problem without any manual work. To the best of our knowledge, our study is the first to investigate the ability of machine learning to identify relevant articles accurately. 5 different machine learning algorithms were tested using 23 predictors based on several metadata fields attached to publications. We find that the Boosted model is the best-performing algorithm and its overall accuracy is 96%. In addition, specificity and sensitivity of the algorithm is 97 and 93%, respectively. As a result of the work, we understood that we can apply the same procedure to understand cancer gene expression big data.

**Keywords :** prediction of publications, machine learning, algorithms, bariatric surgery, comparison of algorithms, boosted, tree, logistic regression, ANN model

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