**CONCLUSION**

The goal of this paper was to develop a supervised machine learning classification model for determining promotions. HR data from MNCs were used to predict which employees qualified for promotion. Knowing which employees are eligible for promotion is very important for every company. Further, the larger the company, the more time and effort it takes to specify the employees qualified for promotion manually. Therefore, the creation of a model that identifies candidates for possible promotion is very useful. The following prediction models were developed: KNN, Logistic Regression, Decision Tree, Random Forest, Support Vector Machine, and Ensemble (Adaboosting, and Gradient Boosting) models. The results show that the Gradient Boosting outperformed the other classification algorithms. The results indicate no bias and that the features recruitment channel and department did not play significant roles in promotion. The most important factor amongst the features was the previous years ratings. The use of machine learning as a predictive decision-making tool is a completely viable solution for the presented problem. The fairly limited data were able to train the algorithms to perform with good accuracy. More data would lead to more optimized solutions. Thus, machine learning in the field of HR analytics can reduce the amount of time that goes into decision making, thereby increasing efficiency. We will continue to investigate more factors that have high correlation with the promotion problem in future study. Also, attempting to anticipate promotion speed or determining whether a promoted employee is qualified for a higher-level post or whether a candidate shows desirable leadership attributes, and attempting to get this model distributed to practically all Saudi Arabia Companies and looking to find a way to improve predictive performance through the development of new features.