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Predicting Employee Preference of Teleworking Using Machine Learning Techniques in the Post COVID-19 Period in Sri Lanka

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Abstract **- Coronavirus Disease (COVID-19) is a new diseasethat has begun since December 2019. As COVID-19 continues tospread around the world, some governments around the world have locked up. Many countries strictly enforce laws to force their citizens to stay at home and away from society. Since the start of COVID-19, many organizations in Sri Lanka have also been looking for the opportunity to work remotely under the teleworking concept instead of traditional working. It has an enormous impact on work and family culture. The study's mainpurpose is to predict the user preference for continuing the teleworking concept after the COVID-19 pandemic. A sample of 325 employees who worked online during the COVID-19 pandemic served as the study's data. Online employees in Sri Lanka were selected using convenience sampling and surveyed about their preferences for working online. A questionnaire wasdesigned to cover all the objectives of the study. The Waikato Environment for Knowledge Analysis (WEKA) tool was used fordata pre-processing and implementation. Furthermore, Nave Bayes, Decision Tree (J48), Random Forest, Multi-Layer Perceptron (MLP), Support Vector Machine (SVM), and Logistic Regression algorithms were used to generate the prediction models. Based on the accuracy, precision, recall, and f-measure evaluations, The Random Forest algorithm outperforms the other six algorithms with a score of 87.84%.**

Keywords - COVID-19 pandemic, Machine Learning, prediction, teleworking