COVID-19 Outbreak Prediction with Machine Learning

Abstract :

Coronavirus disease (COVID-19) is an inflammation disease from a new virus. The disease causes respiratory ailment with manifestations, for example, cold, cough and fever, and in progressively serious cases, the problem in breathing. Our society is facing the huge negative impacts in the field of infrastructure, finance, business, manufacturing, and several other sectors due to COVID-19 outbreak. This project intends to apply the machine learning models simultaneously with the forecast of expected reachability of the COVID-19 over the different regions by using the real-time data to reduce the impact of this deadly virus minimum.

Machine learning models have proved their significance to predict future results and tuouse them to improve the decision making on the future course of actions. The ML models have long been used in many application domains which needed the identification and prioritization of adverse factors for a threat. Several prediction methods are being popularly used to handle forecasting problem. As of now several outbreak prediction models for COVID-19 are being used by officials around the world to make decisions and enforce relevant control measures. Due to a high level of uncertainty and lack of essential data, standard models have shown low accuracy for long-term prediction. Although the literature includes several attempts to address this issue, the essential generalization and robustness abilities of existing models need to be improved. This project am is to present a comparative analysis of machine learning and soft computing models to predict the COVID-19 outbreak. Among a wide range of machine learning models we investigated two models (i.e. XGboost, and Random Forest). Based on the results we got ,we can say that machine learning can be used as an effective tool to control the outbreak.

Keywords:
COVID-19, Coronavirus, Random Forest, XGboost ,mode, prediction, machine learning