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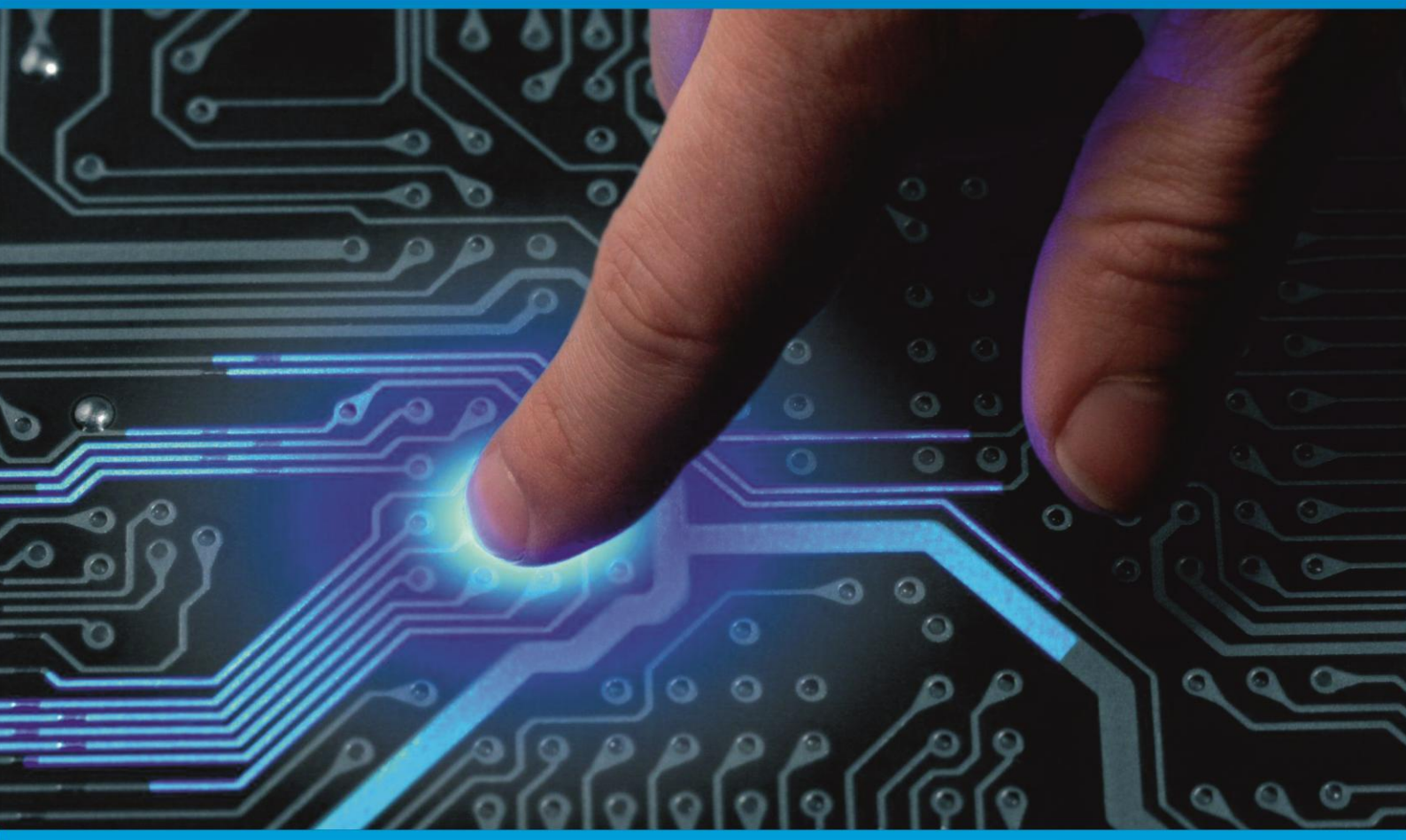

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Real Time Corona Cases Tracking Display System

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ABSTRACT: The forecasting frameworks focused on machine learning (ML) have proven their value in predicting perioperative results to enhance decision-making on the potential course of action. In several application fields, ML models have long been used to define and prioritize adverse factors for a hazard. To deal with forecasting issues, many prediction approaches are commonly used. This study demonstrates the ability of ML models to predict the number of future patients affected by COVID-19, which is currently considered a possible human hazard. In particular, four basic prediction models have been used in thii, such as linear regression (LR), least absolute shrinkage and selection operator (LASSO), support vector machine (SVM) and exponential smoothing (ES) Each of the models makes three forms of forecasts, such as the number of newly infected cases, the number of injuries, and the number of recoveries over the next 10 days.

KEYWORDS: Machine Learning, Python, SVM(Support Vector Machine),LR.

I. INTRODUCTION

In this analysis, this forecasting problem was treated as a regression problem, so the study is based on such state-of-the-art supervised ML regression models such as linear regression (LR), least absolute shrinkage and selection operator (LASSO), support vector machine (SVM), and exponential smoothing machine (SVM) (ES). Using the COVID-19 patient stats dataset provided by Johns Hopkins, the learning models were trained. The dataset was pre-processed and divided into two subsets: the training set (85% records) and the testing set (15 percent records). Our effort in this study is to build a COVID-19 forecasting method for the current human crisis.The number 0f New reported cases, the number of death cases, the number of recoveries, are predicted for the three significant variables of the disease for the next 10 days.

II. RELATED WORK

Real-Quantifying COVID-19 content in the online health opinion war using machine learning was first introduced by R.F. Sear1, N. Vel´asquez [1]. A massive amount of potentially hazardous misinformation about COVID-19 is emerging online. We use machine learning here to quantify COVID-19 content, in particular vaccinations ("anti-vax"), among online opponents of establishment health guidance. We find that a less focused discussion around COVID-19 is being established by the anti-vax community than its counterpart, the pro-vaccination ('pro-vax') community. The anti-vax culture, however, exhibits a wider variety of COVID-19 topics 'flavors' and can thus cater to a wider cross-section of individuals seeking COVID-19 advice online, e.g. individuals who are wary of a required fast-tracked Vaccine COVID-19 or those trying alternative treatments. The antivax movement therefore looks better placed than the pro-vax community to draw new support in the future. This is important because a widespread lack of COVID-19 vaccine acceptance would mean that the world is not providing herd immunity, leaving countries vulnerable to potential resurgences of COVID-19. We provide a mechanistic model that interprets these findings and could assist in determining the possible effectiveness of strategies for intervention. Our method is scalable and thus solves the urgent problem facing social media sites of needing to examine massive quantities of misinformation and disinformation regarding online health.

COVID-19 Future Forecasting Using Supervised Machine Learning Models proposed by FURQAN RUSTAM1, AIJAZ AHMAD RESHI. [2] Forecasting systems based on machine learning (ML) have proven their importance in predicting perioperative results to enhance decision-making on the potential course of action. In several application domains, ML models have long been used to define and prioritize adverse factors for a hazard. To manage forecasting

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problems, many prediction approaches are widely used. This research indicates the ability of ML models to estimate the number of future patients impacted by COVID-19, which is widely considered to be a possible threat to humanity. In this analysis, four traditional forecasting models were used in particular, such as linear regression (LR), least absolute shrinkage and selection operator (LASSO), support vector machine (SVM) and exponential smoothing (ES) to predict the threatening factors of COVID-19. Each of the models makes three forms of forecasts, such as the number of newly infected cases, the number of casualties, and the number of recoveries in the next 10 days. The results provided by the study indicate that the use of these techniques for the current COVID-19 pandemic scenario is a promising mechanism. The findings show that the ES performs best of all the models used, followed by LR and LASSO, which performs well in forecasting new reported events, death rate and recovery rate, while SVM performs poorly given the available dataset in all prediction scenarios.

Artificial Intelligence (AI) and Big Data for Coronavirus (COVID-19) Pandemic: A Survey on the State-of-the-Arts Proposed by QUOC-VIET PHAM1 , DINH C. NGUYEN In [3], The first infected novel coronavirus case (COVID-19) was discovered in Hubei, China in December 2019. The COVID-19 pandemic has spread to 214 countries and regions across the world and has had a huge effect on every aspect of our daily lives. At the time of writing of this report, the number of infected cases and fatalities continues to rise significantly and there is no sign of a well-controlled situation, e.g. 571, 527 deaths worldwide were reported as of 13 July 2020 out of a total of approximately 13,1 million positive cases. Motivated by recent advances in the field of artificial intelligence (AI) and broad data applications in various fields, this paper aims to emphasize their relevance in responding to the outbreak of COVID-19 and in preventing the severe consequences of the COVID-19 pandemic. First of all, we present an overview of AI and Big Data, then identify applications aimed at combating COVID-19, then highlight problems and issues related to state-of-the-art solutions, and finally come up with communications suggestions to effectively track the situation of COVID-19. This paper is intended to provide researchers and societies with new insights into how AI and big data reinforce the situation of COVID-19 and promote more studies to prevent an outbreak of COVID-19.

Detecting Regions At Risk for Spreading COVID-19 Using Existing Cellular Wireless Network Functionalities by Alaa A. R. Alsaeedy and Edwin K. P [4] The purpose of this article is to develop a new strategy to recognize areas of high human density and mobility at risk of COVID-19 spread. Crowded regions (called at-risk regions) with actively moving people are susceptible to spreading the disease, especially if they contain asymptomatic infected individuals along with healthy individuals. Methods: Our framework defines at-risk regions using existing cellular network functions used to ensure smooth coverage for mobile end-user equipment handover and cell (re) collection (UE). As virtually everyone carries UEs, the frequency of handover and cell (re)selection events is highly reflective of the density of mobile people in the region. Results: These measurements, which are cumulative over a very large number of UEs, enable us to classify the regions at risk without sacrificing individual privacy and anonymity. Conclusions: Further monitoring and risk reduction could then be subject to the inferred at-risk regions.

Forecasting the Spread of COVID -19 in India using Supervised Machine Learning Models proposed by Satya Sandeep Kanumalli in that[5] India is one of the heavily populated countries in the world with a population of over 1.3 billion and the danger is very high with the COVID 19 pandemic, despite the fact that the number of cases is still less compared to some of the countries mostly affected by COVID 19, due to government initiatives and some other factors, but in recent days the cases are beginning to plunge to make the situation where We use ML techniques to estimate the distribution of COVID 19 in India here, and forecast the total cases for the next 15 days, and here we use Linear Regression, Polynomial Regression, Polynomial Regression
As ML modals, regression and help vector machine over the data sets collected from the portals of the Central Government and we optimize these modals using various evolutionary parameters such as Mean square deviations, rolling mean and standard deviation. Promising are the findings obtained.

COVID-19 Outbreak Prediction with Machine Learning proposed by Sina F. Ardabili 1 , Amir Mosavi in[6] Officials around the world are using many outbreak prediction models for COVID-19 to make informed choices and implement relevant control measures. Simple epidemiological and statistical models have gained greater attention from authorities among the standard models for COVID-19 global pandemic prediction, and these models are common in the media. Standard models have demonstrated poor accuracy for long term prediction due to a high degree of uncertainty and lack of critical data. While several attempts to address this problem are included in the literature, the basic generalization and robustness skills of current models need to be strengthened. As an alternative to susceptible-infected-recovered (SIR) and susceptible-exposed-infectious-removed (SEIR) models, this paper presents a comparative study of machine learning and soft computing models to forecast the COVID-19 outbreak. Two models showed promising outcomes among a large variety of machine learning models tested (i.e., multi-layered perceptron,

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MLP; and adaptive network-based fuzzy inference system, ANFIS). This study suggests machine learning as an effective method, based on the findings published here, and because of the extremely complex nature of the COVID-19 outbreak and the heterogeneity in its actions across nations.
In order to model the outbreak. In order to illustrate the potential of machine learning for future studies, this paper offers an initial benchmark. This paper further suggests that by combining machine learning and SEIR models, a genuine novelty in outbreak prediction can be realized.

Machine learning based approaches for detecting COVID-19 using clinical text data proposed by Akib Mohi Ud Din Khanday[7] Advances in technology have a rapid impact on any area of life, whether it be medical or some other field. Through its decision-making, artificial intelligence has shown promising health care outcomes by analyzing the data. Over 100 countries were affected by COVID-19 in no time at all. People around the world are vulnerable to potential effects. The development of a control system that will detect the coronavirus is important. Diagnosis of disease with the aid of different AI methods may be one of the solutions for managing the current havoc. By using classical and ensemble machine learning algorithms, we categorized textual clinical reports into four groups in this paper. Using techniques such as term frequency/inverse document frequency (TF/IDF), bag of words (BOW) and report duration, function engineering was conducted. Traditional and ensemble machine learning classifiers were equipped with these characteristics. By having 96.2 percent test accuracy, logistic regression and Multinomial Naı ̈ve Bayes showed better results than other ML algorithms. For better precision, recurrent neural networks will be used in the future.

Supervised Machine Learning Models for Prediction of COVID-19 Infection using Epidemiology Dataset proposed by L. J. Muhammad1 · Ebrahem A. Algehyne [8] With more than 651,247 individuals worldwide having lost their lives since developing the disease, COVID-19 or 2019-nCoV is no longer pandemic but rather endemic. There is currently no specific medication or cure for COVID-19, and dealing with the disease and its effects is therefore unavoidable. Especially in developing nations, this reality has put a huge burden on limited healthcare systems worldwide. While there is neither an efficient, clinically validated strategy of antiviral agents nor an approved vaccine to eliminate the COVID-19 pandemic, there are alternatives that can minimize the enormous burden on not only restricted healthcare systems but also the economic sector; the most promising involve the use of non-clinical techniques such as machine learning, data mining, deep learning and other artificial learning. For 2019- nCoV pandemic patients, these alternatives will facilitate diagnosis and prognosis. In this work, supervised machine learning models for COVID-19 infection were developed with learning algorithms including logistic regression, decision tree, vector support machine, naive Bayes, and artificial neutral network using epidemiology-labeled data set for Mexico's positive and negative COVID-19 cases. Until designing the models, the correlation coefcient analysis between different dependent and independent features was conducted to establish a strength relationship between each dependent feature and the dataset's independent feature. For training the models, 80 percent of the training dataset was used, while the remaining 20 percent was used to evaluate the models. The outcome of the model performance assessment showed that the decision tree model has the highest accuracy of 94.99 percent, while the Support Vector Machine Model has the highest sensitivity of 93.34 percent and the highest specificity of 94.30 percent in the Na'ıve Bayes Model.

Deep Learning Model to Identify COVID-19 Cases from Chest Radiographs proposed by Mat´ıas Cam Arellano, Oscar E. Ramos [9] For the detection of many diseases, the interpretation of radiographs is important, particularly in the thoracic portion where COVID-19 attacks. Many people around the world, because of the quick dissemination of the virus, are suffering from this disease. Deep learning techniques have recently been developed to deal with this detection task in an effort to assist physicians in their diagnosis of COVID-19, as it can be seen from a frontal view chest radiograph. The goal of this study is to investigate the performance of current deep learning algorithms in the detection of COVID-19, and to provide feedback on how the technique can be used in actual clinical settings in the future to assist trained radiologists.

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III. METHODOLOGY

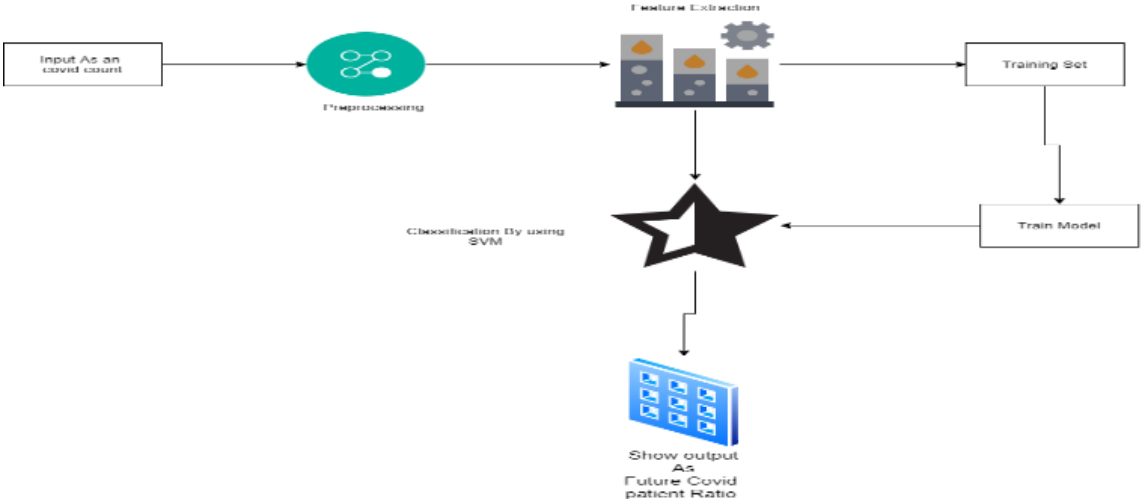

Fig 1. System Architecture

SVM Algorithm: Support Vector Machine" (SVM) is a supervised machine learning algorithm which can be used for both classification or regression challenges. However, it is mostly used in classification problems. In the SVM algorithm, we plot each data item as a point in n-dimensional space (where n is number of features you have) with the value of each feature being the value of a particular coordinate. Then, we perform classification by finding the hyper-plane that differentiates the two classes very well.

IV. CONCLUSION

In this research, an ML-based prediction method was proposed to predict the probability of an outbreak of COVID19 globally. The framework analyzes the data set containing actual past data on the day and uses machine learning algorithms to make predictions for future days. The study results show that, considering the existence and size of the data collection, ES performs best in the current forecasting domain. LR and LASSO also do well to some degree in predicting death rates and verifying cases for forecasting.

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