IJIRCCE

e-ISSN: 2320-9801 | p-ISSN: 2320-9798

INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH

IN COMPUTER & COMMUNICATION ENGINEERING

Volume 9, Issue 6, June 2021

INTERNATIONAL STANDARD SERIAL NUMBER INDIA

Impact Factor: 7.542

International Journal of Innovative Research in Computer and Communication Engineering

| e-ISSN: 2320-9801, p-ISSN: 2320-9798| www.ijircce.com | |Impact Factor: 7.542 |

|| Volume 9, Issue 6, June 2021 ||

| DOI: 10.15680/IJIRCCE.2021.0906039 |

Real Time Corona Cases Tracking Display System

Punam Pote, Prajakta Gaikwad, Apeksha Laad and Neha Damodhar, Prof. Sachin Godse,

B.E (Computer Engineering), SAE, Kondhwa, Pune, India

Professor, Department of Computer Engineering, SAE, Kondhwa, Pune, India

ABSTRACT: Forecasting techniques based on machine learning (ML) have shown useful in anticipating preoperative results and enhancing decision-making on future treatment. Machine learning models have long been employed in several application domains that needed the identification and prioritisation of negative features of a threat. A variety of prediction methodologies are commonly used to deal with forecasting issues. This study demonstrates the ability of machine learning algorithms to forecast the number of patients who would be infected by COVID-19, which is currently considered a potential threat to humankind. To predict the harmful components of COVID19, four common forecasting models were used in this study: linear regression (LR), least absolute shrinkage and selection operator (LASSO), support vector machine (SVM), and exponential smoothing (ES). Each model predicts three things in the following ten days: the amount of newly infected patients, the quantity of fatalities, and the proportion of recoveries.

KEYWORDS: Machine Learning, Preprocessing, Feature Extraction, Segmentation, Support Vector Machine(SVM).

I. INTRODUCTION

Forecasting techniques based on machine learning (ML) have shown useful in anticipating preoperative results and enhancing decision-making on future treatment. Machine learning models have long been employed in several application domains that needed the identification and prioritisation of negative features of a threat. A variety of prediction methodologies are commonly used to deal with forecasting issues. This study demonstrates the ability of machine learning algorithms to forecast the number of patients who would be infected by COVID-19, which is currently considered a potential threat to humankind. To predict the harmful components of COVID19, four common forecasting models were used in this study: linear regression (LR), least absolute shrinkage and selection operator (LASSO), support vector machine (SVM), and exponential smoothing (ES). Each model predicts three things in the following ten days: the amount of newly infected patients, the quantity of fatalities, and the proportion of recoveries.

II. PROBLEM STATEMENT

1. Nowadays, users do not properly track covid instances.
2. Government forecasting is abysmal.
3. Our system will make excellent predictions.

III. LITERATURE SURVEY

R.F. Sear1, N. Vel´asquez, “Real-Quantifying COVID-19 content in the online health opinion war using machine learning”[1], There is a great deal of potentially lethal COVID-19 disinformation circulating on the internet. We use machine learning to examine the COVID-19 content of online opponents of conventional health advice, specifically vaccinations ("anti-vax"). We discover that the anti-vax group is less focused on COVID-19 than its pro-vaccination (or "pro-vax") counterpart. On the other hand, the anti-vax community demonstrates a broader range of “flavours” of COVID-19 themes, which enables it to appeal to a broader cross-section of individuals seeking COVID-19 assistance online, such as those fearful of a mandated fasttracked COVID-19 vaccination or those seeking alternative cures. As a result, the antivax movement appears to be in a stronger position to recruit new adherents than the pro-vax community in the future. This is concerning because, without widespread adoption of a COVID-19 vaccine, the world will fall short of herd immunity, leaving countries exposed to future COVID-19 resurgences. We provide a mechanistic model that helps to comprehend these data and may aid in estimating the efficacy of prospective intervention strategies. Our

| e-ISSN: 2320-9801, p-ISSN: 2320-9798| www.ijircce.com | |Impact Factor: 7.542 |

|| Volume 9, Issue 6, June 2021 ||

| DOI: 10.15680/IJIRCCE.2021.0906039 |

methodology is scalable, addressing a critical issue faced by social media platforms when it comes to analysing enormous amounts of online health misinformation and deception.

furqan rustam1, aijaz ahmad reshi, "COVID-19FutureForecastingUsingSupervisedMachineLearning Models"[2], Machine learning (ML) forecasting approaches have shown useful in predicting preoperative outcomes and improving decision-making on future actions. Machine learning models have long been employed in several application domains that needed the identification and prioritisation of negative features of a threat. A variety of prediction methodologies are commonly used to deal with forecasting issues. This study demonstrates the ability of machine learning algorithms to forecast the number of patients who would be infected by COVID-19, which is currently considered a potential threat to humankind. To predict the harmful aspects of COVID-19, four conventional forecasting models were used in this study: linear regression (LR), least absolute shrinkage and selection operator (LASSO), multi - layer perceptron, and exponential smoothing (ES). In the next 10 days, each model predicts three things: the incidence of newly infected patients, the amount of fatalities, and the quantity of recoveries. The findings of the study indicate that employing these tactics in the current COVID-19 pandemic scenario is a promising mechanism. The results demonstrate that the ES surpasses all other models, followed by the LR and LASSO, which excel at forecasting new confirmed cases, death rates, and recovery rates, respectively, whereas SVM performs poorly in all prediction scenarios given the available data.

quoc-viet Pham , dinh c. nguyen "Artificial Intelligence (AI) and Big Data for Corona virus (COVID19) Pandemic: A Survey on the State-of-the-Arts"[3], The first novel corona virus infection (COVID-19) was discovered in Hubei, China, in December 2019. COVID-19 has spread to 214 countries and locations around the planet, causing havoc on practically every aspect of human life. At the time of writing, the number of infected people and deaths was still rising, with little sign of the situation being under control. As of July 13, 2020, 571, 527 deaths had been documented worldwide from approximately 13.1 million positive cases. This work intends to illustrate the importance of AI and big data in responding to the COVID-19 outbreak and limiting the terrible implications of the COVID-19 pandemic based on recent discoveries and uses of AI and big data in various domains. We begin by discussing artificial intelligence and big data, then find applications for combatting COVID-19, examine the problems and concerns associated with cutting-edge solutions, and lastly make recommendations for successful communication in dealing with the COVID-19 problem. This research will very probably provide researchers and communities with fresh insights into how AI and big data may assist resolve the COVID-19 problem, as well as inspire further research into how to stop COVID-19 spread.
.Alaa A. R. Alsaeedy and Edwin K. P "Detecting Regions At Risk for Spreading COVID-19 Using Existing Cellular Wireless Network Functionalities"[4], The goal of this article is to present a novel technique for identifying regions with high population density and mobility that are at danger of transmitting disease. COVID-19. Crowded areas with active moving people (referred to as at-risk areas) are more likely to spread the disease, especially if they contain asymptomatic infected people alongside healthy ones. Methods: Our system identifies at-risk areas by utilising current cellular network features such as handover and cell (re)selection, which are utilised to maintain continuous coverage for mobile end-user equipment (UE). Because almost everyone has a UE, the frequency of handover and cell (re)selection occurrences is largely reflective to the number of mobile individuals in the vicinity. Results: These measures, which are gathered across a large number of UEs, allow us to identify at-risk areas without jeopardising people' privacy and identity. Conclusions: The identified high-risk areas can subsequently be subjected to additional monitoring and risk mitigation.

Satya Sandeep Kanumalli "Forecasting the Spread of COVID-19 in India using Supervised Machine Learning Models"[5], India is endowed with The country is one of the most densely inhabited in the world, with a population of over 1.3 billion people, and the probability of the pandemic COVID 19 is very high. Despite this, the number of cases remains low in comparison to some of the nations most afflicted by COVID 19, owing to government initiatives and other circumstances, but in recent days, the number of cases has began to climb, making the situation worse in order to avert a pandemic. We apply machine learning techniques to forecast total cases over the next 15 days and anticipate the spread of COVID 19 in India. Over datasets obtained from Central Government portals, we use Linear Regression, Polynomial Regression, and Support Vector Machine as ML modals, and we optimise these modals using different evolutionary parameters such as Mean square errors, rolling mean square errors, and rolling mean square errors. The results are encouraging.

IV. METHODOLOGY

The study focuses on new corona virus predictions, dubbed COVID19. COVID-19 has established itself as a true and imminent threat to human life. It claims tens of thousands of lives each year, and the death rate continues to rise on a

| e-ISSN: 2320-9801, p-ISSN: 2320-9798| www.ijircce.com | |Impact Factor: 7.542 |

|| Volume 9, Issue 6, June 2021 ||

| DOI: 10.15680/IJIRCCE.2021.0906039 |

daily basis throughout the world. To aid in the containment of a pandemic scenario, this study forecasts the death rate, the number of daily confirmed infected cases, and the number of recovered cases during the next ten days. Forecasting was accomplished by the use of four machine learning approaches that were deemed appropriate in this instance. The study's dataset contains daily time series summary tables that detail the number of confirmed cases, fatalities, and recoveries during the epidemic's initial days. For this investigation, the dataset was pre-processed to include daily global statistics on the number of deaths, confirmed cases, and recoveries. The time series that resulted was generated using the reported data.

V. EXPERIMENTAL RESULTS

Based on the scores of the specified features, SVM algorithms are used to estimate the expected COVID-19 patient. RBF and C are also utilised to select the best hyperplane. It enables us to compare hyperplane attributes in order to dig further into support vectors. We employed bar charts to do statistical analysis on multiple groups of participants at once. SVM employs the kernel function to generate optimal performance values in order to anticipate the expected COVID-19 scenarios. The outputs of the machine learning system and Hyperplane are contrasted to demonstrate the theory of support vector approaches. To forecast confirmed COVID-19 pandemic cases, the SVM machine learning technology was applied. Excellent disease prevention and surveillance measures are required. In order to keep the national economy growing, the government must allocate the necessary resources for medical supplies, healthcare equipment, agricultural activity control, and manufacturing activity control. As a result, developing an accurate forecasting model that allows the government to make educated decisions concerning macroeconomic emergency measures is crucial. The SVM model is one of the greatest machine learning algorithms for prediction because of its simplicity. In this analysis, which portrays the present COVID-19 pandemic scenario around the world, the SVM technique was utilised to compute the ongoing pattern and intensity of the outbreak. SVM models would be used in the proposed study to forecast COVID-19 cases all over the world.

VI. SYSTEM ANALYSIS

A. System Architecture:

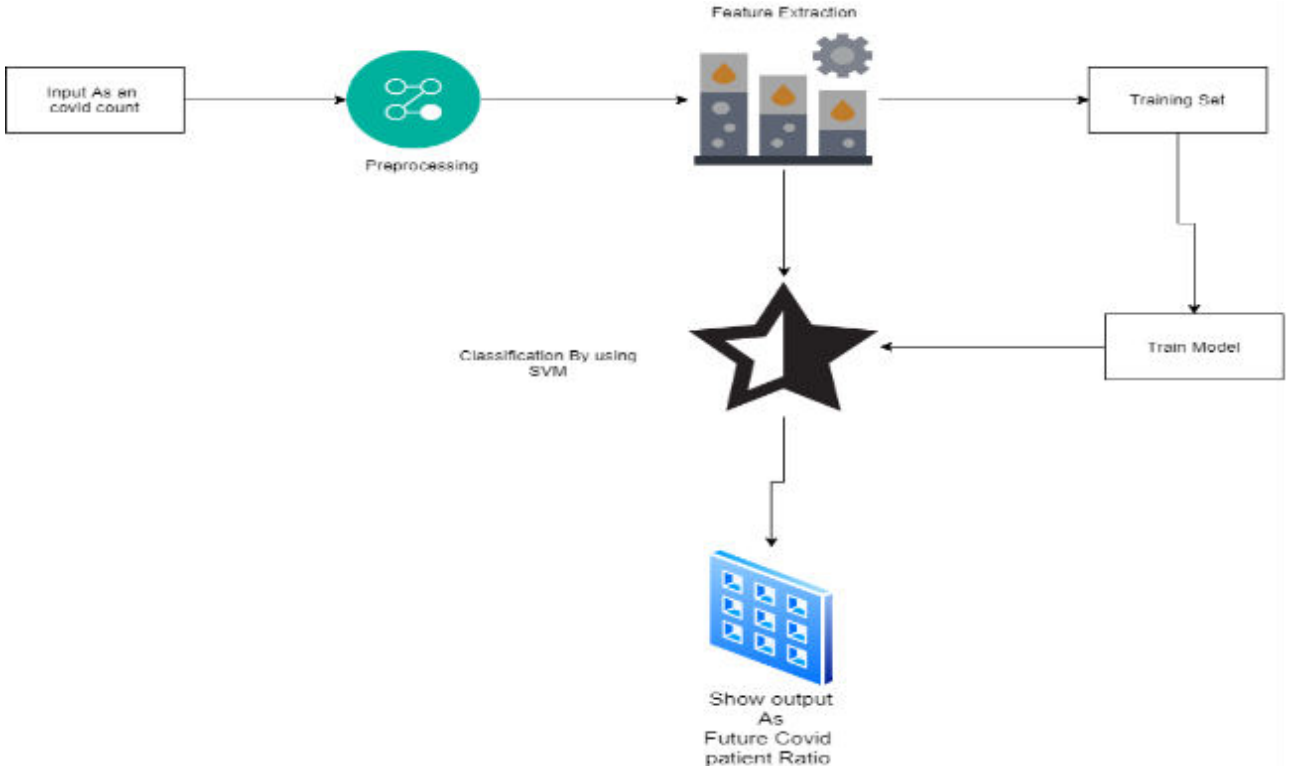

Fig. System Architecture

| e-ISSN: 2320-9801, p-ISSN: 2320-9798| www.ijircce.com | |Impact Factor: 7.542 |

|| Volume 9, Issue 6, June 2021 ||

| DOI: 10.15680/IJIRCCE.2021.0906039 |

B. **Explanation:**

Modules:

i)Classification-Although geometric image transformations (e.g., rotation, scaling, and translation) are classified as pre-processing methods due to the similar techniques used, the objective of pre-processing is to improve the image data by suppressing undesirable distortions or enhancing certain image features that are necessary for subsequent processing.

ii)Feature Extraction-Feature extraction is a stage in the dimensionality reduction process that entails dividing and condensing a large set of raw data into smaller groupings. As a result, processing will be simplified. The primary characteristic of these enormous data sets is their large number of variables.

iii)Classification- To address classification and regression problems, a supervised machine learning technique called the "Support Vector Machine" (SVM) can be utilised. However, it is mostly employed to resolve categorization issues. Each data point is represented in n-dimensional space (where n is the number of features), with the value of each feature being the SVM algorithm's value for a particular coordinate. After that, the categorisation is completed by selecting the hyperplane that most clearly separates the two classes.

C. **Algorithm:**

Support Vector Machine:

SVM (Support Vector Machine) is a technique for classification and regression problems that requires supervision. However, it is mostly employed to resolve categorization issues. Each data pixel is defined in n-dimensional space (where n is the lot of characteristics), with the pixel value being the SVM algorithm's value for a particular coordinate. The Support Vector Machine, or SVM, is a well-known approach for performing Supervised Learning on classification and regression issues. However, it is mostly utilised to address classification problems in Machine Learning. A support vector machine, by formal definition, is a discriminative classifier with a separating hyperplane. In those other sense, the algorithm builds an ideal hyperplane from labelled training data that categorises new samples (supervised learning). In two-dimensional space, this classifier is a line that divides a plane into two sides, with each class one on each side. In a word, SVM is a diagram that defines data sets in space, mapped in such a manner that data points belonging to distinct categories are separated by the greatest amount of space feasible. The svm classification classifier is a point for one-dimensional data. Similarly, a line represents a two-dimensional support vector classifier, while a plane represents a three-dimensional vector support classifier. The gradient boosting classifier will be a subspace in four or more dimensions.

VII.CONCLUSION

An ML-based prediction system has been proposed in this article for estimating the danger of a global COVID19 outbreak. The system uses machine learning algorithms to analyse a data set containing day-by-day actual past data and create predictions for the following days. Given the type and amount of the data set, the study's findings show that ES performs best in the current forecasting domain. LR and LASSO are also good at projecting mortality rates and confirming cases to some extent.

REFERENCES

[1] H.Asri,H.Mousannif,H.AlMoatassime,andT.Noel,"Usingmachinelearningalgorithmsforbreastcancerriskprediction anddiagnosis,"ProcediaComputer Science, vol. 83, pp. 1064–1069, 2016.

[2] F. Petropoulos and S. Makridakis, "Forecasting the novel coronavirus covid19," Plos one, vol. 15, no. 3, p. e0231236, 2020.

[3] G. Grasselli, A. Pesenti, and M. Cecconi, "Critical care utilization for the covid-19 outbreak in lombardy, italy: early experience and forecast during an emergency response," Jama, 2020.

[4] WHO.Naming the corona virus disease(covid-19) and the virus that causesit. [Online]. Available: https://www.who.int/emergencies/diseases/novelcoronavirus2019/technical-guidance/naming-the-coronavirus-disease-(covid-2019)-and-thevirus-that-causes-it

[5] C.P.E.R.E.Noveletal.,"Theepidemiologicalcharacteristicsofanoutbreak of 2019 novel coronavirus diseases (covid-19) in china," Zhonghua liu xing

| e-ISSN: 2320-9801, p-ISSN: 2320-9798| www.ijircce.com | |Impact Factor: 7.542 |

|| Volume 9, Issue 6, June 2021 ||

| DOI: 10.15680/IJIRCCE.2021.0906039 |

[6] bingxuezazhi=Zhonghualiuxingbingxuezazhi,vol. 41,no. 2,p. 145,2020.
[7] R.SchraerandE.Lawrie,"Coronavirus: scientistsbrand5Gclaims'complete rubbish,'"BBCNews,2020. [Online]. Available: https://www.bbc.com/news/52168096. [Accessed: 05- Apr-2020].
[8] World Health Organization, "Coronavirus disease (COVID-19) advice for the public: myth busters," World Health Organization, 2020. [Online]. Available: https://www.who.int/emergencies/diseases/novelcoronavirus-2019/advice-forpublic/myth-busters. [Accessed: 13-Apr-2020].
[9] K. Benner and M. Shear, "After threats, Anthony Fauci to receive enhanced personalsecurity,"TheNewYorkTimes,2020. [Online]. Available: https://www.nytimes.com/2020/04/01/us/politics/coro navirus-fauci-security.html. [Accessed: 02-Apr-2020].
[10] S. Almasy, H. Yan, and M. Holcombe, "Coronavirus pandemic hitting some African-American communities extremely hard," CNN Health, 2020. [Online]. Available: https://www.cnn.com/2020/04/06/health/uscoronavirus-updatesmonday/index.html. [Accessed: 13-Apr-2020].
[11] 10 A.Maqbool,"Coronavirus: why has the virus hit African Americans sohard?," BBC News, 2020. [Online]. Available:
[12] J.Guy,"EastAsianstudentassaultedin'racist'coronavirusattackinLondon," CNN.com,2020. [Online]. Available: https://www.cnn.com/2020/03/03/uk/coronavirusassaultstudent-london-scli-intl-gbr/index.html. [Accessed: 13-Apr-2020].
12 H.Yan, N.Chen, andD.Naresh, "What's spreading faster than corona virus in the US? RacistassaultsandignorantattacksagainstAsians,"CNN.com,2020.

INNO SPACE
SJIF Scientific Journal Impact Factor
Impact Factor: 7.542

doi cross ref

ISSN INTERNATIONAL STANDARD SERIAL NUMBER INDIA

निस्केयर NISCAIR

INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH

IN COMPUTER & COMMUNICATION ENGINEERING

9940 572 462 6381 907 438 ijircce@gmail.com

www.ijircce.com

Scan to save the contact details