

In Order to Accurately Predict the Patients of COVID-19 Newly Formed Cases by Using SVM

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Abstract— In this paper, we have shown you how to find covid-19 recovered cases, death cases and new cases using different types of machine learning algorithms. Machine learning based forecasting mechanism have proved their significance to anticipate in perioperative outcomes to improve the decision making on the future course of action. The ML modules have long been used in many application domains which needed the identification and prioritization of adverse factor for a threat. Several prediction methods are being popularly used to handle forecasting problems. This study demonstrate the capability if ML models to forecast the number of upcoming patient affected by COVID-19 which is presently considered as a potential threat to mankind. In particular four standard forecasting models such as linear regression, least absolute shrinking and selection operator, support vector machine and exponential smoothing have been used in this study to forecast the threatening factor of COVID-19. Three types of prediction are made by each of the models such as the number of newly infected cases the number of deaths, and the number of recoveries in the next 10 days.

Keywords: Machine Learning, Covide-19 Cases Smart System

I. INTRODUCTION

A coronavirus named „2019-nCoV“ or „COVID-19“ by the World Health Organization (WHO) is in charge of the current outbreak of pneumonia that began at the beginning of December 2019 near in Wuhan City, Hubei Province, China.

Coronavirus was first detected in China and has now been detected in more than 150 locations in the United States, including in the United States.”

Though three major areas of work already are ongoing in China to advise our awareness of the pathogenic origin of the outbreak. These include early inquiries of cases with symptoms occurring near in Wuhan during December 2019, ecological sampling from the Hunan Wholesale Seafood Market as well as other area markets, and the set of full reports of the point of origin and type of wildlife species marketed on the Hunan market and the destination of those animals after the market has been stopped.

A. Motivation

Using this method will make it easier for the government to detect Covid-19 cases. And the corona cases will be found as early as possible so that the patient will be treated in less time and properly so that the patient will not die.

B. Objective

Program to effectively build a strong platform for covid-19 patient and government empowerment in covid security. Using this program provide more security to covid-19 new

cases, death cases and recover cases in less time consumption. applicable at all spheres of governments and level of health care delivery There is a clear strategy for timely health system readiness and response.

II. LITERATURE SURVEY

A. Linear Regression Algorithm (LR)

LR parsing algorithm, is the identical for all the parser, but the parsing table is unique for each parser. It consist of following constituent as follows. It contains the given string. As well as it terminated with a \$ sign. The composite of state symbol as well as on-going input sign is used to mention to the parsing table in order to take the parsing resolution. Linear Regression can be regarded a Machine Learning algorithm that permit us to map numeric inputs to metric outputs, furniture a line toward the data points

B. Support Vector Machine

SVM is special well liked supervised learning algorithms, which is utilized for classification and regression questions. Even so, essentially, it is used for classification problems in machine learning. The main function of the SVM algorithm is to generate the best line as another option decision boundary that can amalgamate n- dimensional space within classes so that we can easy to set the new data point in the accurate grouping in the future. This leading resolution boundary is called a hyper plane. SVM pick out the utmost vectors that assist in generating the hyper plane. These extreme cases are also known as support vectors, as well as consequently algorithm is named as support vector machine.

C. Exponential Smoothing

Exponential Smoothing is a method for operate data from a series of primordial scrutiny to downplay the rest of unsystematic differences Mathematical modelling, the formation of a numerical simulation for a data set, frequently treats perceived data as the sum of two or more components, One of which is arbitrarily error, the authority between the perceived value as well as the fundamental accurate value. When properly petition, smoothing methods keep down the effect of the arbitrarily difference, making it simple to see the underlying phenomenon – a benefit the two in presenting the data as well as in making prophesy of time ahead values . They are mentioned to as “Smoothing” methods for the reason that they remove spiked ups as well as downs correlated with arbitrarily differences as well as leave at the back of a smoother line or curve when the data is graphed. The drawback of smoothing methods is that when incorrectly used they can also smooth away main tendency or also smooth away main tendency or else recurrent swap within the data and the random variation, as well as consequently twist any prophecy they provide.

III. PROBLEM STATEMENT

Covid-19 pandemic analysis using different machine learning algorithm like SVM, LR and ES algorithm to find covid-19 daily cases, death cases and recover cases using this function doctor easy to find all type of covid-19 cases and take action against the patient. and using machine learning algorithm easy to find all type of cove-29 cases in less time.

IV. METHODOLOGY

This section describe the way used for measuring the literature.

A. Module

In this module the admin has to log in by using valid username and password. After login successfully he can do some operation.

V. RESULT



This is our login page put your valid username and password and click on login button.



This is the page where login get successfully.

VI. CONCLUSION

In this project plan, a Machine learning-based Guess system has been developed for predicting the risk of covid-19 outbreak globally. The system analyses data set containing the day wise actual past data and makes predictions for upcoming days using machine learning algorithms. The result

of the study proves that ES performs best in the current forecasting domain given the nature and size of the data set. Linear regression and LASSO also perform well for forecasting to some extent to find death cases ratio and confirm cases.

REFERENCES:

- [1] Mr. khatal sunil & Dr .y .k sharma; Health Care Patient Monitoring using IOT and Machine Learning
- [2] Mr.khatal sunil & Dr .y .k sharma ; Analyzing the role of Heart Disease Prediction system using IOT and machine Learning
- [3] Prof.khatal.S.S, Mr.Bhimashanker Patil, Ms.Dipali Awate, Mr.Abhijeet Choudhary, Mr.Sourabh Pandey; COVID-19 Time Series Forecasting of Daily Cases,Deaths Caused and Recoverd Cases Using Machine Learning.
- [4] "Proceedings of the Third International Conference on Computational Intelligence and Informatics", Springer Science and Business Media LLC, 2020
- [5] Vinay Kumar Reddy Chimmula, Lei Zhang. "Time Series Forecasting of COVID-19 transmission in Canada Using LSTM Networks",Chaos, Solitons & Fractals.
- [6] Hochreiter, Sepp, and J'urgen Schmidhuber. "Long short-term memory." Neural computation 9.8 (1997): 1735-1780
- [7] L'angkvist, Martin, Lars Karlsson, and Amy Loutfi. "A review of unsupervisedfeature learning and deep learning for time-series modeling."Pattern Recognition Letters 42 (2014): 11-24
- [8] Taieb, Souhaib Ben, et al. "A review and comparison of strategies for multi-step ahead time series forecasting based on the NN5 forecasting competition." Expert systems with applications 39.8 (2012): 7067-7083
- [9] Yang, Zifeng, et al. "Modified SEIR and AI prediction of the epidemics trend of COVID-19 in China under public health interventions." Journal of Thoracic Disease 12.3 (2020): 165
- [10] LeCun, Yann, Yoshua Bengio, and Geoffrey Hinton. "Deep learning." nature 521.7553 (2015): 436-444
- [11] Peng, Liangrong, et al. "Epidemic analysis of COVID-19 in China by dynamical modeling." arXiv preprint arXiv:2002.06563 (2020)
- [12] Roda, Weston C., et al. "Why is it difficult to accurately predict the COVID- 19 epidemic?." Infectious Disease Modelling (2020)
- [13] Hui He, Ran Hu, Ying Zhang, Runhai Jiao, Honglu Zhu. "Chapter 18 Hourly Day-Ahead Power Forecasting for PV Plant Based on Bidirectional LSTM", Springer Science and Business Media LLC, 2019
- [14] Benvenuto, Domenico, et al. "Application of the ARIMA model on the COVID-2019 epidemic dataset." Data in brief (2020): 105340
- [15] Tayaba Abbasi, King Hann Lim, Ke San Yam. "Predictive maintenance of Oil and Gas Equipment using Recurrent Neural Network", IOP Conference Series:Materials Science and Engineering, 2019
- [16] Yudistira, Novanto, et al. "UV light influences covid-19 activity through big data: tradeoffs between northern

- subtropical, tropical, and southern subtropical countries.” medRxiv (2020)
- [17] Paterlini, M. ”Closing borders is ridiculous”: the epidemiologist behind Sweden’s controversial coronavirus strategy.” Nature (2020)
- [18] Pascanu, Razvan, Tomas Mikolov, and Yoshua Bengio. ”On the difficulty of training recurrent neural networks.” International conference on machine learning. 2013
- [19] Artificial Intelligence and Network Applications”, Springer Science and Business Media LLC, 20”Web,20
- [20] Bayer, Justin Simon. Learning Sequence Representations. Diss. Technische Universit“at Munchen, 2015

