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MACHINE LEARNING ALGORITHM BASED CORONA VIRUS PREDICTION

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Abstract: In the Existing System, In order to slow down thespread of the disease, known as COVID-19, and reduce the stress on healthcare structures and intensive care units, many governments have taken drastic and unprecedented measures, such as closure of schools, shops and entire industries, and enforced drastic social distancing regulations, including local and national lockdowns. To effectively address such pandemicsin a systematic and informed manner in the future, it is of fundamental importance to develop mathematical models and algorithms to predict the evolution of the spread of the disease to support policy and decision making at the governmental level. It is urgent to conduct prediction research on the development and spread of the epidemic. In this project, a hybrid artificial-intelligence (AI) model is proposed for COVID-19 prediction.

Keywords: component, COVID, infectious, prediction, regression

INTRODUCTION

According to data from the National Bureau of Statistics of China, The detect electric discharge states in gases based on the information on visual images? This article proposes a new kind of method where we build several detection models for different states of corona discharge by applying four kinds of machine learning algorithms to extract color, brightness, and shape information characteristics of visible images taken by a digital camera. Every model is then tested on a new set of images to measure its performance. The four different machine learning algorithms are support vector machine (SVM), K-nearest neighbor regression (KNN), single layer perceptron (SLP), and decision tree (DT) algorithms. The prediction results show that the color features perform best among all three types of features and the KNN algorithm performs best among all four algorithms which have greatly harmed the health of the majority of people. Early detection ofCOVID 19 is having the significant impact on curtailing the COVID 19 transmission at faster rate and is the need of the hour. An Artificial Intelligence diagnostic using Deep Learning models trained with X ray images of COVID infected and non-infected patients is a new promising method that helps in early prediction and identification of COVID infected persons. This paper `COVID prediction from X-ray images' acquaints a system to be utilized for automatic identification of corona virus from chest X-ray by machines in less time i.e. less than five minutes. For this we consider dataset of chest x-ray images of pneumonia, COVID 19 disease and normal infected people. We use the concept of Transfer Learning for its advantage of decreasing the training time for a neural network model. Using the VGG model of Transfer Learning we show an accuracy of 99.49% in prediction of the COVID 19 from X ray of the suspected patient.

COVID-19 originally known as Corona virus has been declared as pandemic by the World Health Organization on 11th March 2020. This infectious disease discovered from Wuhan, China in December 2019 and has affected millions of people around the world. Every country around the world is undergoing global economic crises and therefore, it's the needof an hour to predict the prevalence and incidence of this disease throughout the world. This will help the medical practitioners and government agencies in India to make key decisions and appropriate measures to demystify the disease and prevent the country from global economic recession. This paper aims to analyze the number of cases in India by utilizing the machine learning techniques and exploratory data analysis to observe the growth patterns and map the increasein the frequency of those infected. The source of data was authentic COVID-19website which was showing confirmed diseased cases of Delhi, Uttar Pradesh and India as a whole. The count of confirmed cases taken from 14 th March 2020 to 3 rd. September 2020 put together will help to know how effective the current efforts have been and also help to realize the need of working further to combat this virus

Novel corona (COVID-19) disease is an infectious disease caused by a newly discovered coronavirus. Covid-19 was started from Wuhan China and present it is spread all over the world. Presently the USA is affected by the Covid-19 virus hardly. Present there are more than 4.0 million confirmedcases and more than 200 thousand happens because of the Covid-19 virus. [1]. However, there is no medicine found by the researchers yet for the virus. According to the WHO (World Health Organization), the COVID-19 virus is spreading by several methods. And for protection from the COVID-19 virus, their suggestion is community distance. Moreover, doctors and other medical instructors advise concentrating more on doing sanitizations often. Presently there are lots of researches doing for identifying reasons,

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make a medicine in this area. When it concentrates on the spread of the COVID-19 virus it cloud be able to identify thatthere is a difference between Asian and European countries

EXISTING SYSTEM:

In existing system the long short-term memory (LSTM) network with the natural language processing (NLP) module is introduced into our epidemic model to update the infection rate and further improve the predictive accuracy of the model. LSTM is a classic recurrent neural network (RNN). LSTM can effectively alleviate gradient explosion and gradient disappearance during the trainingprocedure by introducing the constant error carousel unit. Machine learning (ML) based forecasting mechanisms have proved their significance to anticipate in perioperative outcomes to improve the decision making on the futurecourse 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. In particular, four standard forecasting models, such as linear regression (LR), least absolute shrinkage and K-Means Clustering, support vector machine (SVM), and exponential smoothing (ES).

PROBLEM STATEMENT:

Standardization of problem lists in the safety concerns.

- ‘‘Traceable’’ has become a challenge for all food and food-related companies.
- In practical applications, data in traditional traceability systems is centralized, and authoritative agencies manage the central database of thetraceability system.
- Since the traceability data of each supply chainnode are managed by enterprise, the data are easy to tamper with.
- Therefore, the reliability of information transmission among different roles in the agricultural supply chain needs to be increased.

PROPOSED SYSTEM:

1) This research focuses on predicting the possible number of confirmed cases using techniques of data mining.
2) Data analysis with particularly regression, clustering and predictive analysis.
3) We apply blockchain technology to the traceability of agricultural products, and propose solutions to the problems of heavy load, slow query speed and privacy dataprotection on the existing blockchain technology.

4) Here it does some data modeling part to visualize a pattern between the spread of the COVID-19 virus and food categories. Thereafter using a machine learning model here it implement a prediction modelAdvantage of Proposed System:

- COVID-19 detected from the diagnostic test and antibody test takes a lot of time. According to the facts, even RT-PCR, the gold standard diagnostic test, has a high chance of generating false-negativeresults.
- This research was done to identify a pattern between the spread of the COVID-19 virus and theFood categories used by the people.
- The point is to structure and actualize a programmed corona illness determination framework utilizing PYTHON FLASK FRAMEWORK. The dataset informational collection for corona sicknesses was utilized as the principle database for preparing and testing the created framework. Every framework has two principle modules, specifically, preparing and testing, where 80% and 20% of the Dataset informational collection were arbitrarily chosen for preparing and testing purposes separately.

I. SYSTEM REQUIREMENT

A. SOFTWARE REQUIEMENTS SPECIFICATION:

Operating System:		Windows 7 / 8 / 10
Language	:	Python
IDE	:	visual code
Front End	:	HTML,CSS,JS
Back End	:	Java Servlet

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Framework : Anaconda

B. HARDWARE REQUIEMENTS SPECIFICATION:

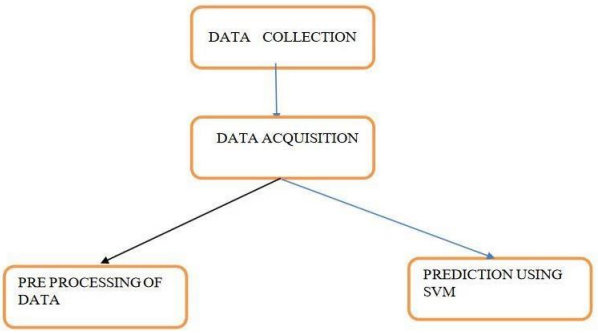
Processor : i3 or above

Ram : 2 GB or above

II. SYSTEM ARCHITECHURE

System Architecture design-identifies the overall hypermedia structure for the Web Application. Architecture design is tied to the goals establish for a Web Application, the content to be presented, the users who will visit, and the navigation philosophy that has been established. Content architecture, focuses on the manner in which content objects and structured for presentation and navigation. Web Application architecture, addresses the manner in which the application is structure to manage user interaction, handle internal processing tasks, effect navigation, and present content. Web Application architecture is defined within the context of the development environment in which the application is to be implemented.

PROCESSOR LOGIN



III. SYSTEM IMPLEMENTATION

1. Instructional Scenario
2. Data Collection And Preprocessing
3. Data Analysis
4. Data Prediction

IV. RESULT AND ANALYSIS

A result is the final consequence of actions or events expressed qualitatively or quantitatively. Performance analysis is an operational analysis, is a set of basic quantitative relationship between the performancequantities. future course, next we plan to explore theprediction methodology using the updated dataset and use the most accurate and appropriate ML methods for forecasting. Real-time live forecasting will be one of the primary focuses in our future work

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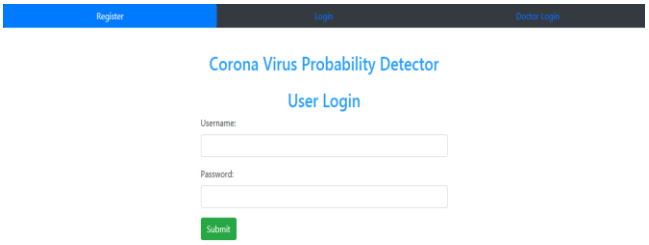
HOME PAGE:

USER LOGIN



VIRUS DETECTOR

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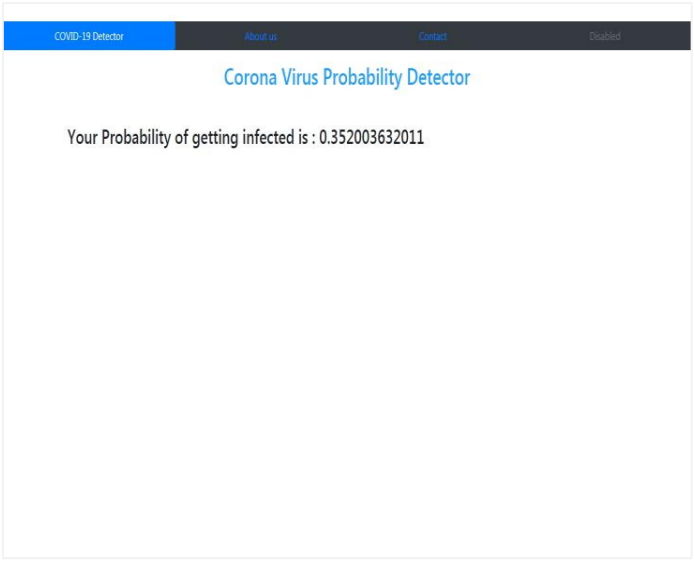

PROBABLITY INFECTED

	fever	bodypain	age	runnyNose	diffbreath	titeFlue	infectionProb
2	102	1	65	1	0	0	0
3	98	0	45	1	0	0	0
4	111.3	1	61	0	-1	1	1
5	97	0	14	0	1	1	0
6	100.2	1	76	1	-1	1	1
7	104.3	1	52	0	1	1	1
8	102	0	53	0	-1	1	1
9	100	0	54	1	-1	1	0
10	101	0	56	0	-1	1	0
11	105	1	53	1	1	0	1
12	105	0	50	1	0	0	0
13	103	1	24	0	-1	0	1
14	104	1	32	0	-1	1	1
15	104	1	64	1	-1	0	1
16	97	0	70	1	-1	1	1
17	102	1	27	0	0	0	1
18	104	1	39	0	0	1	0
19	97	0	41	0	1	1	1
20	98	1	64	1	0	0	0
21	105	1	41	1	-1	0	1
22	104	1	33	0	1	0	0
23	102	0	36	1	1	1	0
24	104	0	47	1	-1	0	0
25	101	1	28	0	0	1	0
26	104	1	34	1	-1	1	0
27	104	1	45	1	0	0	0

CONCLUSION

In this project, an ML-based prediction system has been proposed for predicting the risk of COVID-19 outbreak globally. The system analyses dataset containing the day- wise actual past data and makes predictions for upcoming days using machine learning algorithms. The project forecasts thus can also be of great help for the authorities to take timely actions and make decisions to contain the COVID-19 crisis

Active participation on social media is scarce, hence the novelty and added value of our study. It is worth mentioning that the performance of the generalized predictive model is slightly lower than the performance of each individual year model. This is in line with the findings in , which addresses the issue of aggregating trace data from different courses for creating one generalized model for academic success prediction. The differences in instructional conditions and technology use, even in the context of the same discipline, may influence the prediction of academic success; in addition, the individual differences of the students involved in the studies (e.g., meta cognitive and motivational factors) may have an impact on the learning analytics results. Any attempt at generalizability needs to carefully consider the pedagogical and disciplinary context of the predictive model.

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