A NEW APPROACH FOR USING MACHINE LEARNIN WITH CONTENT - BASED IMAGE RETRIEVAL (CBIR)

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ABSTRACT:

In this project we are using COVID-19 dataset to train machine learning algorithms and then predict whether person has type diabetes and if type 2diabetes detected in person test record then he will be more vulnerable to COVID-19 disease, heart or kidney disease. To implement this project we build two machine learning model where first model detect person has diabetes or not and if diabetes detected then application will use his CT SCAN LUNG images to detect COVID or other diseases. The proposed learning technique has empowered clients to improve their list items dependent on the presentation of CBIR framework.

KEYWORDS: diabetes, COVID-19, SARS-CoV

INTRODUCTION:

Diabetes and uncontrolled glycaemia were addressed as essential markers of sincerity and passings in patients contaminated with various infections, including the 2009 pandemic flu A (H1N1), SARS-CoV and MERS-CoV. within the power SARS-CoV-2, a couple of appraisals didn't locate an inexpensive relationship among diabetes and incredible pollution. Regardless, different reports from China and Italy showed that more arranged patients with consistent pollutions, including diabetes, were at higher danger for silly COVID-19 and mortality.

LITERATURE SURVEY

1. Clinical Characteristics of Coronavirus Disease 2019 in China

Guan W.J., Ni Z.Y., Hu Y., Liang

Abstract

BACKGROUND

Since December 2019, when Covid illness 2019 (Covid-19) arose in Wuhan city and quickly spread all through China, information have been required on the clinical attributes of the influenced patients.

METHODS

We extricated information in regards to 1099 patients with lab affirmed Covid-19 from 552 medical clinics in 30 areas, self-sufficient districts, and regions in territory China through January 29, 2020. The essential composite end point was admission to an emergency unit), (the utilization of mechanical ventilation, or passing.

RESULTS

The common age of the affected person is forty seven years. 41.9% of sufferers are women; The very last operation befell in sixty seven sufferers (6.1%), five.0% of whom have been admitted to the ICU, 2.3% used incoming ventilators and 1.four% died; most effective 1.9% died. records of direct touch with wildlife. She has been homeless for seventy two years.3% contacted Wuhan residents, 31.3% visited Wuhan. The maximum not unusual place signs and symptoms have been fever (43.8% at hospitalization, 88.7% at hospitalization) and cough (sixty seven.8%). Diarrhea is rare (3.8%). The common incubation length is four days (relying at the habitat, 2-7). Upon receipt, frosted glass mild have become the maximum not unusual place locating in radiology on computed tomography (CT) (56.157 of 877 sufferers with slight to excessive illness (17.9%) and five of 173 seriously unwell sufferers (2.9%) did now no longer hit upon detectable radiation or recurring CT, and 83.2% of hospitalized sufferers had leukopenia. Less blood turned into found.

PROPOSED APPROACH:

This consent statement focuses on the use of visual aids, be it patients with heart, kidney or other diseases, diabetes and stroke. According to WHO, 10 out of 6 people have diabetes. The disease creates compounds that mean vascular disease, mild blindness, myocardial infarction (MI), increased blood pressure, etc. Illness is a disease that occurs when blood sugar levels rise and eventually lead to other health problems such as heart disease, kidney disease and retinopathy. Patients with complications such as new diseases, retinopathy, heart disease and other endocrine diseases, mainly due to overused diet, poor eating habits and supplementation with antioxidants and antimicrobials. The patients treated were not included in the study.

DEEP LEARNING ALGORITHMS:

Convolution Neural Networks (CNN) and Support vector machine (SVM)

CNN: Convolutional neural network (ConvNet / CNN) is a detailed learning algorithm that takes image input, providing value (readable tools and options) to aspects / sections Image elements and differentiate them from each other.

SVM: SVM is a supervised machine learning algorithm that can be used to share or recover problems, transform data using a process called kernel wizards, and find appropriate parameters between The output can be based on this change.

Step 1: There are number of images present in image database and first step is to extract the features from images present in database.

Step 2: The performance of Context Based Image Processing Using Machine Learning Approaches is depend on shape, texture and color or other features of image. For this feature extraction CNN algorithm is used.

Step 3: The shape, texture and color information low level features of images are extracted. And in feature database these features are stored as feature vector.

Step 4: A query image is enters into the system. After extraction of query image features a feature vector is generated which is further compared with all vector stored in database.

Step 5: In high dimensional feature space firstly the image data is represented in terms of features and then images similarity is stored in the database which is further compared with query image. For the comparison of image features and query features SVM algorithm is used.

CONCLUSION:

Coronavirus has spread rapidly since being identified in Wuhan, indicating its widespread spread. Early detention, early collection and early management can help actively control disease and side effects. Diabetes and other disorders are important indicators. Future studies are expected to provide high genetic diversity in patients with COVID-19, as well as the underlying pathophysiological mechanisms of the relationship between COVID-19 and diabetes, and our clinical management.

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