COVID-19 predictor

Abstract

Coronavirus disease (COVID-2019) is a dangerous growing quickly pandemic that is spreading quickly across the world. The Kingdom of Saudi Arabia (KSA) registered the first case of COVID-19 on 2 Mar 2020. Since that, the number of infections has been increasing daily. The World Health Organization (WHO) reported 248 million cases with more than 5 million deaths worldwide in. Nov 2021. The KSA has taken several measures to control the spread of COVID-19, including imposing a curfew on the cities of the Kingdom stopping Umrah and performing Hajj in reduced numbers from within the Kingdom, that had an effect in limiting the spread of the virus. Recently, many types of research and studies concerning the impact of (Covid-19) in all respects especially on health and economy.

In this study, we propose to generate a more accurate diagnosis model of (COVID-19) based on patient symptoms by applying Machine Learning, for a supervised learning task to analyze the data. We aim to generate a classification model for (COVID-19) dataset to predict whether a patient will be infected or not. Also, does wearing a face mask reduce the risk of infection?

Question/need:

In this project, we propose to generate a more accurate diagnosis model of (COVID-19) based on patient symptoms by applying Machine Learning, for a supervised learning task to analyze the data. We will use Logistic Regression and Decision Tree models for (COVID-19) dataset to predict whether a patient will be infected or not. Also, does wearing a face mask reduce the risk of infection?

Data Description:

Data were collected from India on year 2020 The dataset contains 5434 rows × 21 columns (Breathing Problem, Fever, Dry Cough, Sore throat, Running Nose, Asthma, Chronic Lung Disease, Headache, Heart Disease, Diabetes, Hyper Tension, Fatigue, Gastrointestinal, Abroad travel, Contact with COVID Patient, Attended Large Gathering, Visited Public Exposed Places) [1] the most important elements by which we can determine whether a person will be infected or not in this table display more details about data [2].

Tools:

The main tools Jupyter Notebook for writ code
Pandas (pandas.read_csv) to Read a comma-separated values (csv) file into DataFrame.
Also, Seaborn for data visualization and Scikit-Learn.

[1] https://covid19.who.int/table

[2] https://www.kaggle.com/hemanthhari/symptoms-and-covid-presence

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