

# COVID-19 case analysis

## ABSTRACT:

A case study is a methodological research approach used to generate an in-depth understanding of a contemporary issue or phenomenon in a bounded system. A case study is one of the most widely used and accepted means of qualitative research methods in the social sciences. The case study approach is particularly useful to employ when there is a need to obtain an in-depth appreciation of an issue, event or phenomenon of interest, in its natural real-life context . Case studies provide researchers with an opportunity for greater depth of understanding of an issue. The case study design is preferred as a research strategy when “how,” “why,” and “what” questions are the interest of the researcher.

## INTRODUCTION:

Coronavirus or 2019-nCoV is an epidemic, but it exists, with more than 651,247 people worldwide having lost their lives due to Covid infection. As of now, there is no particular treatment or remedy for Coronavirus, and in this manner living with the illness and its manifestations is unavoidable. This reality has set a monstrous weight on restricted medical services frameworks overall particularly in the non-industrial countries

## Problem Statement

To design a system which will be used to detect the symptoms of covid19 like heart-rate and blood pressure. The data received will be further used for analysis. AI (ML) is perhaps the most exceptional ideas of man-made

brainpower (computer-based intelligence), and gives an essential way to deal with creating mechanized, mind boggling and target algorithmic methods for multimodal and dimensional biomedical or numerical information

## **A. Deliverables**

- To study the dataset and pre-process it.
- To study the Support Vector Machine for covid prediction
- To study the the Decision Tree and Random Forest for covid prediction.
- To study the Naive Bayes and Logistic Regression for covid prediction.
- To develop an Android app to detect Covid Symptoms.
- To recognize the best technique which gives the best accuracy and sensitivity.

## **B. Current Scope**

ML techniques are used to investigate large and unstructured large-line database. The diagnosis of jungle fever, typhoid and other vascular diseases, genomic and genetic testing and Diabetics risk assessments are part of the biomedical scenarios for ML techniques. Much exploration has effectively been finished utilizing different man-made brainpower for diagnosing and foreseeing Coronavirus disease and recuperation. In crafted by information digging prescient model for Coronavirus patient's recuperation were created with four information mining calculations yet anyway among them, model settled on of the optimal tree has the most elevated precision of 99.85%

## **PROGRAM:**

```
import numpy as np  
  
import pandas as pd  
  
import matplotlib.pyplot as plt  
  
data = pd.read_csv('case_time_series.csv')
```

```
Y = data.iloc[61:,1].values
R = data.iloc[61:,3].values
D = data.iloc[61:,5].values
X = data.iloc[61:,0]
plt.figure (fig size = ( 25, 8 ))
ax = plt.axes()
ax.grid (linewidth=0.4, color=
```

```
'#8f8f8f')
```

```
ax.set_facecolor("black")
```

```
ax.set_xlabel('\nDate'
```

```
,size=25,color=
```

```
'#4bb4f2')
```

```
ax.set_ylabel('Number of Confirmed Cases\n'
```

```
,
```

```
size=25,color=
```

```
'#4bb4f2')
```

```
plt.xticks(rotation=
```

```
'vertical'
```

```
, size=
```

```
'20'
```

```
, color=
```

```
'white')
```

```
plt.yticks(size=20, color=
```

```
'white')
```

```
plt.tick_params(size=20,color=
```

```
'white')
```

```
for i, j in zip(X, Y):
```

```
ax.annotate (str (j), xy = (i, j+100), color=
```

```
'white'
```

```
,
```

size=

'13')ax.annotate('Second Lockdown 15th April'

, xy = (15.2,

860),

xy text = (19.9, 500),

color =

'white'

,

size =

'25'

,

arrow props = dict(color=

'white'

```
, linewidth=0.025))
```

```
plt.title("COVID-19 IN: Daily Confirmed\n"
```

```
,
```

```
size = 50, color =
```

```
'#28a9ff')
```

```
ax.plot(X, Y,
```

```
color =
```

```
'#1F77B4'
```

```
,
```

```
marker =
```

```
'o'
```

```
,
```

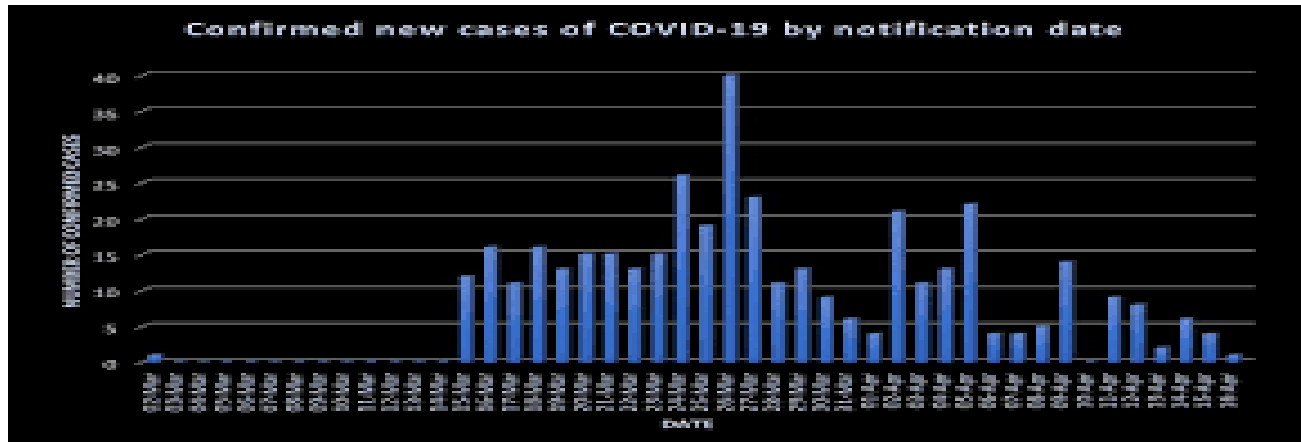
```
linewidth = 4,
```

```
markersize =15,
```

```
markeredgecolor=
```

```
'#035E9B')
```

## OUTPUT:



## PROGRAM:

```
df_latest = df_latest.sort_values(by=['Confirmed'], ascending = False)
```

```
plt.figure(figsize=(12,4), dpi=80)
```

```
plt.bar(df_latest['States'][:10], df_latest['Confirmed'][:10],
```

```
align=
```

```
'center'
```

```
, color=
```

```
'blue')
```

```
plt.ylabel('Number of Confirmed Cases'
```

```
, size = 12)
```

```
plt.title("States with maximum confirmed cases till Aug'21"
```

```
, size =
```

```
16)
```

```
plt.show()
```

**OUTPUT:**



