



NITTE
EDUCATION TRUST

N.M.A.M. INSTITUTE OF TECHNOLOGY

(An Autonomous Institution affiliated to Visvesvaraya Technological University, Belagavi)

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Department of Computer Science and Engineering

(B.E. Computer Science & Engineering Program Accredited by NBA from 2018-19 to 2021-25)

Report on Mini Project

Covid 19 data analysis

Course Code : 21CSA31

Course Name : R Programming

Semester: III SEM

Section: D

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Date of submission: 21-01-2023

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ABSTRACT

Data and information visualization presumes that "visual representations and interaction techniques take advantage of the human eye's broad bandwidth pathway into the mind to allow users to see, explore, and understand large amounts of information at once. Information visualization focused on the creation of approaches for conveying abstract information in intuitive ways. It will benefit any field of study that requires innovative ways of presenting large, complex information. The advent of computer graphics has shaped modern visualization.

Visualization is the use of computer-supported, visual representation of data. Unlike static data visualization, interactive data visualization allows users to specify the format used in displaying data.

Common visualization techniques are:

- 🕒 Line graph: This shows the relationship between items. It can be used to compare changes over a period of time.
- 🕒 Bar chart: This is used to compare quantities of different categories.
- 🕒 Scatter plot: This is a two-dimensional plot showing variation of two items.
- 🕒 Pie chart: This is used to compare the parts of a whole.

INTRODUCTION

PROBLEM STATEMENT

Statistical analysis and visualization of date-wise covid-19 data using R and present in easy to read format.

OBJECTIVES

- Get data from a reliable source
- Sort/filter the data visualize and analyze using scatter plots in date vs new cases and date vs Deaths.
- Present the data in a website.

METHODOLOGY

IMPLEMENTATION

In brief, a Nodejs server is used to create plots by R and display it over a website. Requirements: you should have before setting up a server install Nodejs.

Begin by creating a javascript file, install libraries express and r-integration.

Set up API which takes three parameters start-date, end-date and country for the scatter plot. The r-integration function is created to run the R-script in the server, which takes in the parameter of

passed through the APL

Here Rscript in the server helps to create/overwrite the images of the plot. Plots will be sorted by India and from the beginning date of the data set to the ending date by default.

On successful plot the payload is sent back to the web page with the message "success"\"fail" with image URL. The image is then populated in the webpage for visualization.

RESULTS AND DISCUSSIONS

Enter the range

Start date

mm / dd / yyyy

To date

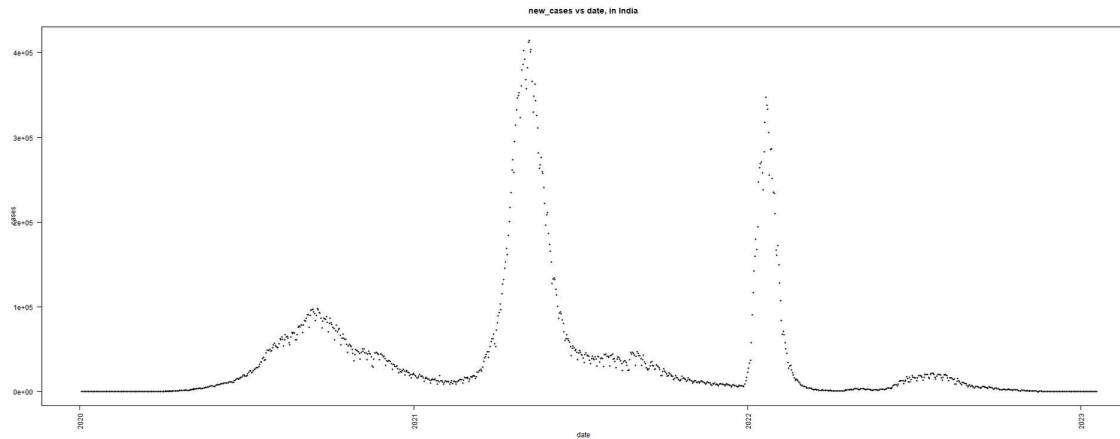
mm / dd / yyyy

Select Country

India

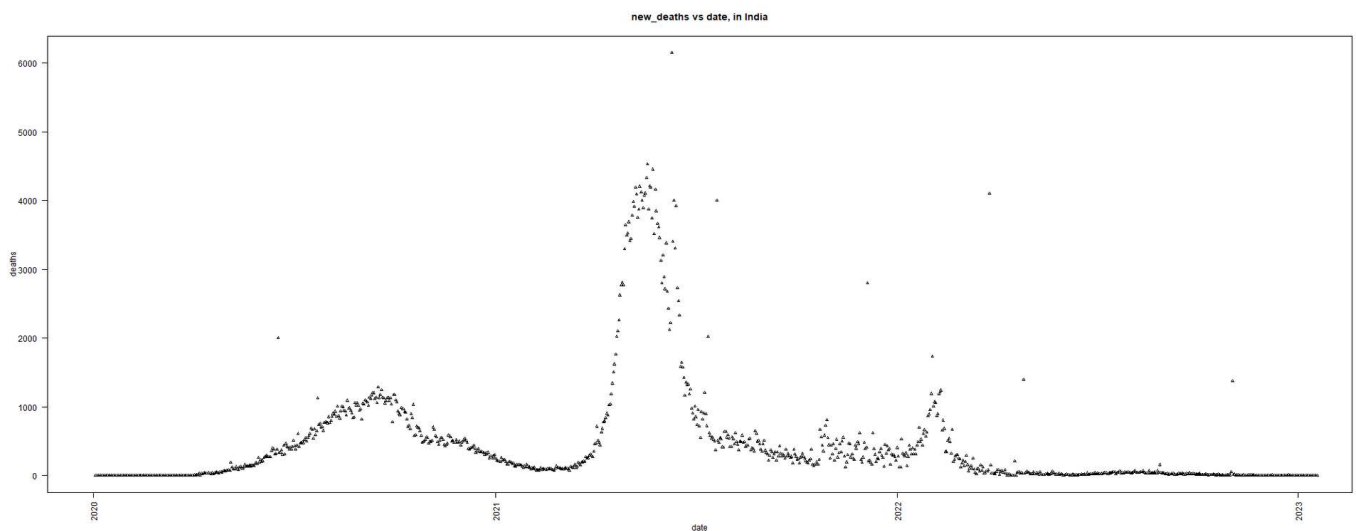
get plot

Cases Plot

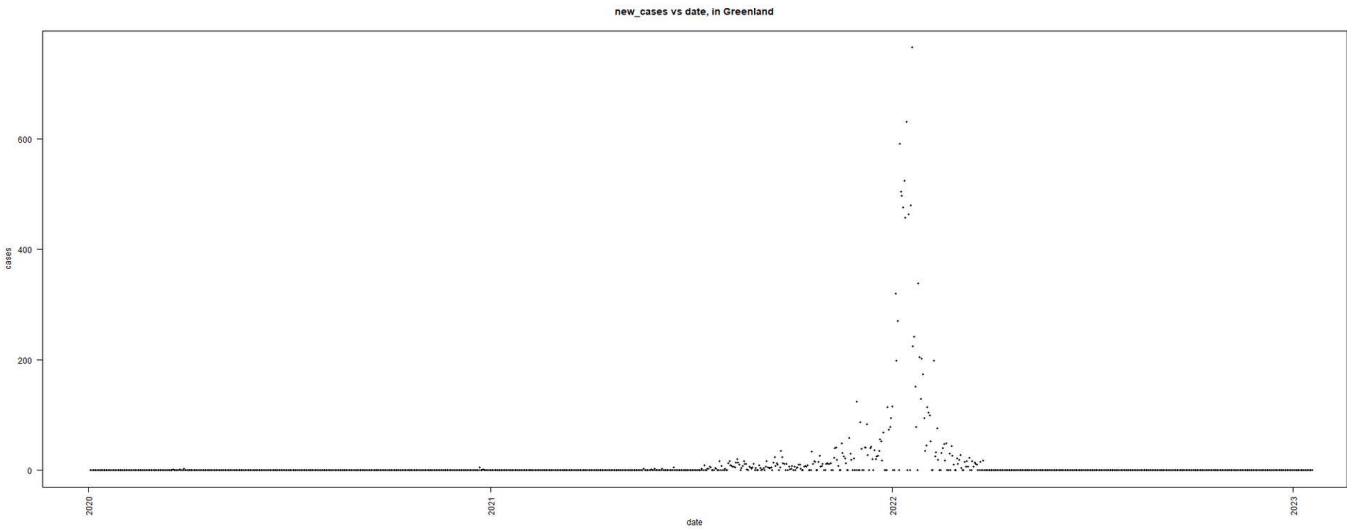


The above graph represents the data of number of covid cases against date. We can observe the rise and fall in above graph.

Deaths Plot



The above graph represents the data of number of death cases against date. We can observe the rise and fall in above graph.



CONCLUSION AND FUTURE SCOPE

Data visualization is used for processing large set of data in a graphical or pictorial way in an organized fashion. It has emerged as a powerful and widely applicable tool for analyzing and interpreting

complex and large data. It is able to communicate the clarity, accuracy and efficiency of the data. This

can be helpful in many fields like medical, research.

Implementation of Regression model for the plotting and prediction. Making it available for unique data sets. Web scrapping to get real time data for more reliable visualization and regression model

REFERENCES

[1]