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A Survey on Covid-19 Analytical Timeline

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Abstract: Usually data is quantitative, and the goal is to show it in diagrams, graphically, etc. One of the main ways to create understanding is to make comparisons between data. At its core, data perception is a way of communicating and making sense of information. The novel coronavirus (COVID-19) that was discovered first near the end of 2019 has impacted nearly every factor of existence as we know it. This paper specializes in the occurrence of the virus in India. As people facing a global health crisis that is a major challenge, we look forward to accounting and information that can help us understand what's going on.

Visual storytelling is an important skill across the field. We should focus on visual media more now than ever before. We must position our emotions collectively so that we will all be part of the solution, by conveying stories that might be realistic, precise, and genuine. This is why we see the popularity of graphs that compare COVID-19 pandemic data from different states of India. Apart from communication, data Visualisation also plays a role in helping people change their behavior. Once the virus has spread, public health officials need to make critical decisions about how and when to talk. One of the most important things to do is to make sure that people change their behavior if it is not clear what they need to do now. Viewing data was very important for communication and persuasion.

We aim to use the inseparable relationship between people and the internet to create a sound understanding of the covid-19 crisis around the world and display it on a website in a sequential form.

Keywords: covid-19, Pandemic, Population, Data, storytelling, Pollution, Visualisation, Internet, Graphically, Website.

I. INTRODUCTION

The novel coronavirus (COVID-19) was first reported to Wuhan (Hebei province, China) in December 2019. After the first outbreak, COVID-19 continued to spread throughout China and soon spread. in others. countries inside and outside Asia. To date, over 45 million cases of HIV infection have been confirmed in more than 180 countries with the death toll at more than 4 million.

The Covid-19 Analytical Timeline is our project where we used data visualization and Storytelling together to display the whole covid-19 story, where did it come from and how does it spread so much in just a short period of time shutting down not just the small countries but also the topmost countries. We have gathered data of covid-19 cases of all the States in India and tried to display all of the pieces of information with data storytelling.

We have used graphs, charts, and pie charts to display the whole number of cases from time to time and region-wise to make it easy to understand. The project is a case study of the whole covid-19 Scenario with the help of data science but with the help of storytelling.

The project includes Data collection, gathering, and cleaning and then using the data visualization to make it readable for the viewers but also in a storytelling method.

II. RELATED WORK

The coronavirus disorder commenced in China in Wuhan's city in December 2019 and is because of the SARS-Cov-2 virus as named through the sector health corporation (WHO). The virus became transmitted to people, most probably, from the virus of the bats around November 2019 in Wuhan, China. The virus and the disease have spread and unfolded worldwide since January 2020. Italy, Iran, and Spain had been the various first nations to go through the most. In mid-March, COVID-19 had become the largest hassle plaguing and crippling the world and every factor of our lives and continued to accomplish that for at least three months around the globe. The virus was named COVID-19 by the WHO, and the virus was referred to as the novel coronavirus (novel due to the fact it is a new member of the coronavirus family). to begin with, they named it Cov-19 or 2019-nCov after which modified the name to SARS-COV-2). consequently, now the virus is SARS-COV-2, and the disease is COVID-19 or the 'Novel Coronavirus disease 2019'. From the own family of human coronaviruses (H-CoV's), three fairly pathogenic H-Cov's had been diagnosed up to now [10], which include: (1) Middle East Respiratory Syndrome Coronavirus (MERS-CoV); (2) severe acute respiratory syndrome (SARS) coronavirus (SARS-CoV), and (3) the 2019 novel coronavirus (or SARS-Cov-2), and formerly named 2019-nCoV by

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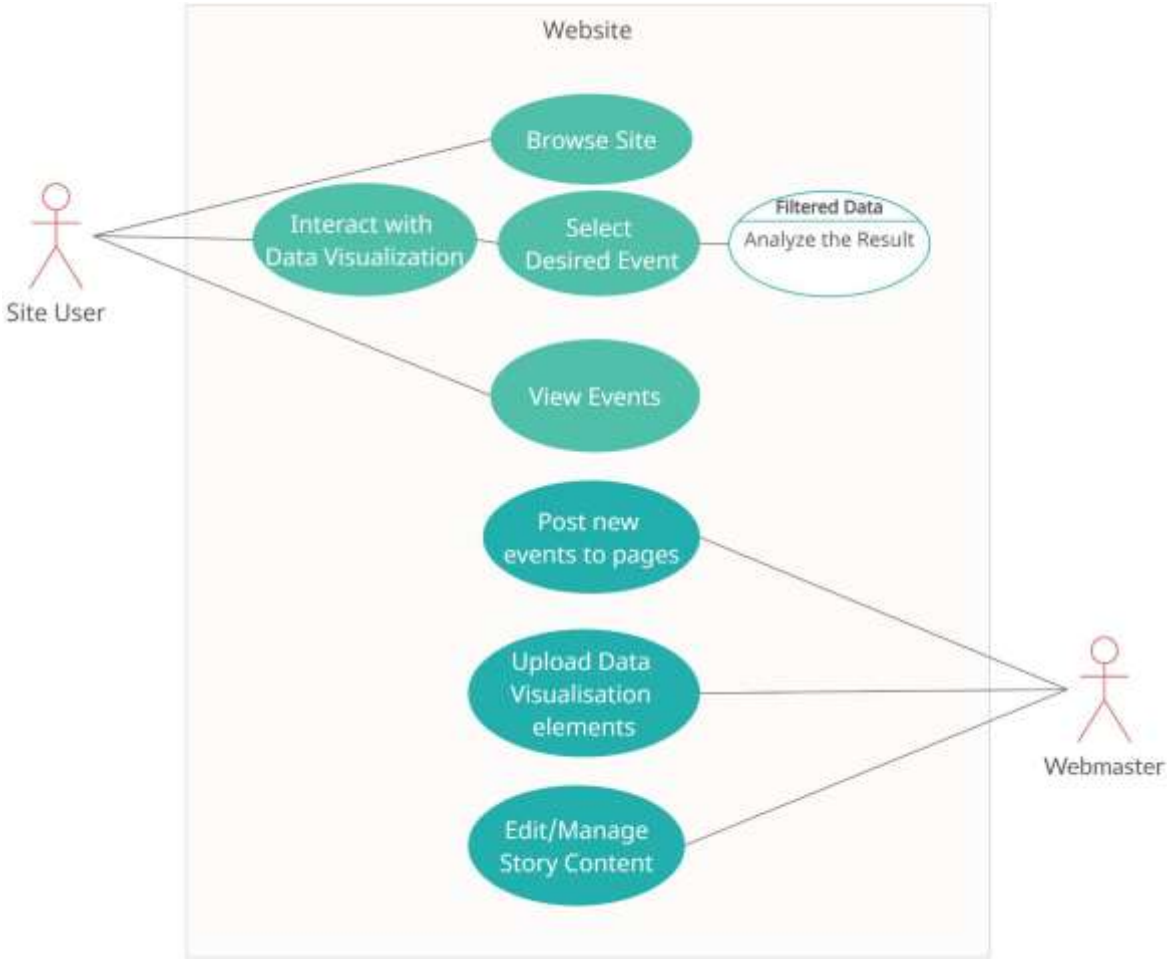
using the world health organization (WHO) [10]. among these 3, the MERS-CoV was liable for 2494 cases and 858 deaths in 27 countries at some stage in the 2012 MERS outbreak; whereas the SARS-CoV pathogen became liable for >8000 cases and 774 humans died in 37 nations during the SARS outbreak in 2002 to 2003; and SARS-Cov-2 brought on almost 4 million deaths to this point.



Use case Diagram

III. DATA COLLECTION

The data collection system consists of the Indian COVID-19 data available publicly. The data sources that we have used are the Ministry of Health and Family Welfare, Covid-19 India, and Wikipedia. The sources that we have mentioned will provide a different prediction perspective for each state. The data collection was designed to provide seamless data in a consistent and structural format. Timewise, consistency, and proper data were the main focus throughout the whole data collection process.

The data that will be shown on the website is going to be real-time updating daily estimates of the officially confirmed corona cases. Based on the data that has been collected, surveys employ various methods to produce the estimated number of corona cases in all of the regions in the States of India for which sufficient data is available.

IV. DATA VISUALIZATION

Finally, the collection is very essential to convert into meaningful visualizations so that the trends, insights, and behavior of our data can be observed. Visualization will help our website to connect with more audiences with the help of the graphs, bar, and charts to give our viewers a better understanding and easy to analyze the data that we are trying to present.

To have a better understanding of the whole covid-19 scenario we present the estimates of the whole Indian region visualizations. It intends to represent the overall distribution of the pandemic around every state of India, identifying the areas with higher infection rates and the least infection rates.

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V. DATA STORYTELLING

Data storytelling is the blend of two attributes which are (1) Hard data and (2) Human communication. We have used data visualization and data storytelling together to give our audience the best reading experience and easy-to-understand content to analyze the whole COVID-19 Scenario. The whole story of the Covid-19 Pandemic has disrupted every industry and disturbed every aspect of life. How it started, where it started, and how it is going.

VI. CONCLUSION

The present paper provides a case study on the Covid-19 data collected in India. We have shown that with the help of Data visualization and Storytelling the Covid-19 analytical timeline provides a more clear picture of the spread than only standard techniques of data visualization. People will be able to understand better the whole covid-19 scenario through this case study with the help of data visualization and storytelling.

There are various methods by which the analysis can be implemented. For example, one could repeat the same survey of data from different parts of the world. such predictions will be requiring the consideration of more such real-life data than we have studied in this paper.

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