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Multi-Disciplinary Approach to Data Analytics

A REVIEW OF THE HANDLING OF THE COVID-19 PANDEMIC IN INDIA FROM THE BIG DATA PERSPECTIVE

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ABSTRACT

COVID-19, as a global pandemic, gave rise to a massive response by nations in their way to protect their citizens from the virus. The economic impact, the migrant crisis, the unexpected death toll, and the pandemic have unfolded one crisis after the other.

The paper aims to review the action plan for the COVID-19 pandemic in India through a big data perspective. The relevance of Big Data applications is highlighted with the help of State-wise analysis, the vaccination program in India, the Aarogya Setu App, and with other significant measures taken by the Government of India. The paper works on how Big Data and its usage can provide insights into the current state of the Data, how various policy initiatives worked in tackling the pandemic, and its impact on the population. The paper concludes with India's preparedness in terms of pandemics in the future and emphasizes the transformative impact of big data in the context of the COVID-19 pandemic.

Keywords- Big data, Aarogya Setu App, Vaccine, Future Pandemics, Technology

INTRODUCTION

Since the first outbreak in December 2019, the COVID-19 epidemic has led to human loss and devastation. The pandemic triggered lifestyle changes from increased internet usage and dependence to cultural changes at workplaces. The pandemic has also led to increased interest in understanding epidemics and infectious diseases among both historians and the general public. As of March 24, 2020, India has recorded a total of 9 deaths and 519 confirmed cases. Due to the increase in cases, the Government announced a strict 21-day lockdown across the country on March 25, 2020. India experienced multiple waves, with the first wave peaking in September 2020 and the second one in April-May 2021. The second wave was particularly severe, leading to a sharp increase in cases and fatalities. India launched one of the world's largest vaccination campaigns in January 2021. Multiple vaccines,

including Covishield and Covaxin were administered to eligible populations. India faced challenges related to supply and distribution as well as vaccine hesitancy. The pandemic led to economic disruptions affecting many sectors. Big Data analytics has played a crucial role in monitoring and responding to the pandemic with the emergence of Big Data on the same.

OBJECTIVES OF THE STUDY

- To review the handling of the COVID-19 pandemic through the Big Data lens;
- To assess the Aarogya Setu App and its usage, especially for the vaccination drive.
- To explore the learning of Big Data and the possibility of effective usage in the future.

REVIEW OF LITERATURE

A study by Vinay Kailash Upadhyay (2022) highlights the effectiveness of big data analytics and its usefulness in managing COVID-19 and how big data has helped reduce data replication and ignore null values. The solution gives users the flexibility to enable or disable these values. Additionally, the article compares and contrasts common patterns discovered between combinations.

Bibhas Chakraborty (2020) notes in his study that it is equally important to look at the spread of the disease in each state separately, analyze the data on the number of infected people in each state of India, and predict the number of infections for that state in the next 30 days. He also noted that Maharashtra, Delhi, Gujrat, Madhya Pradesh, Andhra Pradesh, Uttar Pradesh, and West Bengal have been placed in the severe category, while the remaining states are in the controlled category.

Fahmida Aslam and Yang Yue (2022) emphasize that big data is an effective tool to prevent and manage risks related to vaccine allocation. The Government should enable the comprehensive use of big data in epidemic situations in all areas of the prevention process. The study also recommends the use of big data in combination with other new



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CERTIFICATE

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