Ideation Phase

Team ID	PNT2022TMID27276
Project Name	ANALYTICS FOR HOSPITAL'S HEALTH CARE DATA

LITERATURE SURVEY

S. No	TITLE	JOURNAL	AUTHORS & YEARS	TECHNIQUES	PROBLEM DESCRIPTION
1	Big Data In Healthcare 2022	High tech trends	Javier nieto leon (2022)	Deep analysis, precision analysis, divide and conquer analysis and High dimensional analysis.	Big data has a more significant effect on healthcare. Owing to three significant developments in the healthcare sector, the vast amount of data available, increasing healthcare costs, and an emphasis on consumerism. Big data makes it possible for healthcare systems to turn these barriers into opportunities for personalized patient experiences and quality care.
2	Big Data Analytics in Healthcare	Research Gate	Prableen Kaur(2021)avier nieto leon	Hadoop data processing	In recent years, huge amounts of structured, unstructured, and semi-structured data have been generated by various sectors around the world and, neither of this data is homogeneous. This enormous amount of data, referred to as 'big data', has started to play a pivotal role in the evolution of healthcare practices and research. In this paper, we discuss how by rapid digitalization along with other factors, the health industry has been confronted with the need to handle the big data being produced rapidly at an exponential speed.
3	Big Data Analytics in Healthcare	Research Gate	J. N. Undavia and A. M. Patel(2020)	The technological advancements have also inferred the way healthcare systems work. Treatment models, data capturing of population or a person, deciding the treatment once a disease is diagnosed, the model of diagnosis, etc.	The technological advancement has also opened up various ways to collect data through automatic mechanisms. One such mechanism collects a huge amount of data without any further maintenance or human interventions. The health industry sector has been confronted by the need to manage the big data being produced by various sources, which are well known for producing high volumes of heterogeneous data. The article shows that the existence of huge amount of data in healthcare industry and the data generated in healthcare industry is neither homogeneous nor a simple type of data.

4	Data Analysis of COVID-19 Hospital Records	Springer	Vrushabh Gada, Madhura Shegaonkar, Madhura Inamdar, Sharath Dinesh, Darsha Sapariya, Vendant Knode.(2022)	Contextual patient Classification System	Humanity today is suffering from one of the most dangerous pandemics in history, the Coronavirus Disease of 2019 (COVID-19). Although today there is immense advancement in the medical field with the latest technology, the COVID-19 pandemic has affected us severely. The virus is spreading rapidly, resulting in an escalation in the number of patients admitted. We propose a contextual patient classification system for better analysis of the data from the discharge summary available from the research hospital. The classification was done using the Knuth–Morris–Pratt algorithm.
5	Integrative analysis for COVID-19 patient outcome prediction	NCBI	Chao H, Fang X, Zhang J, Homayounieh F, Arru CD, Digumarthy SR, Babaei R, Mobin HK, Mohseni I, Saba L et al (2021)	deep learning based image segmentation	Management of high-risk patients with early intervention is a key to lower the fatality rate of COVID-19 pneumonia, as a majority of patients recover naturally. Therefore, an accurate prediction of disease progression with baseline imaging at the time of the initial presentation can help in patient management.
6	Hospital Emergency Management Plan During the COVID-19 Epidemic	NCBI	Cao Y, Li Q, Chen J, Guo X, Miao C, Yang H, Chen Z, Li C, Li L (2020)	multilayered Long Short-Term Memory (LSTM) is employed for discriminative semantic representation learning, while a deep Convolutional Neural Network (CNN) is used	The confirmed and suspected cases of the 2019 novel coronavirus disease (COVID-19) have increased not only in Wuhan, Hubei Province, but also China and the world. Enormous demand for handling the COVID-19 outbreak challenged both the health care personnel and the medical supply system. In West China Hospital, emergency department (ED) undertook the mission of clinical reception, primary diagnosis, and interim treatment for the suspected cases of COVID-19.
7	COVID-19 severity in a designated hospital in Shenzhen, China.	Research Gate	Cai Q, Chen F, Wang T, Luo F, Liu X, Wu Q, He Q, Wang Z, Liu Y, Liu L et al (2020)	Statistical Analysis	Patients with obesity are at increased risk of exacerbations from viral respiratory infections. However, the association of obesity with the severity of coronavirus disease 2019 (COVID-19) is unclear. We examined this association using data from the only referral hospital in Shenzhen, China.
8	Characteristics, management and outcomes of critically ill COVID-19 patients admitted to ICU.	NCBI	Saha A, Ahsan MM, Quader TU, Shohan MUS, Naher S, Dutta P, Akash AS, Mehedi HH, Chowdhury AAU, Karim H et al (2021)	Statistical Analysis and plotting	This study aimed to analyze the epidemiological and clinical characteristics of COVID-19 cases and investigate risk factors including comorbidities and age in relation with the clinical aftermath of COVID-19 in ICU admitted cases in Bangladesh.

9	Application of big data technology for COVID-19 prevention and control in China	Research Gate	Wu J, et al(2020)	Deep learning	In the prevention and control of infectious diseases, previous research on the application of big data technology has mainly focused on the early warning and early monitoring of infectious diseases. Although the application of big data technology for COVID-19 warning and monitoring remain important tasks, prevention of the disease's rapid spread and reduction of its impact on society are currently the most pressing challenges for the application of big data technology during the COVID-19 pandemic.
10	Data analysis of Covid-19 pandemic and short-term cumulative case forecasting using machine learning time series methods.	Research Gate	Ballı S (2021)	Machine learning for time series forecasting	The Covid-19 pandemic is the most important health disaster that has surrounded the world for the past eight months. There is no clear date yet on when it will end. As of 18 September 2020, more than 31 million people have been infected worldwide. Predicting the Covid-19 trend has become a challenging issue. Furthermore, time series prediction model using machine learning was proposed to obtain the curve of disease and forecast the epidemic tendency. Linear regression, multi-layer perceptron, random forest and support vector machines (SVM) machine learning methods were used. The performances of the methods were compared according to the RMSE, APE, MAPE metrics and it was seen that SVM achieved the best trend. According to estimates, the global pandemic will peak at the end of January 2021 and estimated approximately 80 million people will be cumulatively infected.