**LITERATURE SURVEY**

**[1] Tintinalli, Judith E, “Disaster Preparedness”, Tintinalli’s Emergency Medicine: A Comprehensive Study Guide, 9th Edition, McGraw-Hill Education, 2019, ISBN: 1260019934.**

Disasters have claimed millions of lives and cost billions of dollars worldwide in the past few decades. Examples of large-scale disasters include the terrorist attacks of September 11, 2001; the 2004 Pacific Ocean tsunami; the 2010 earthquake in Haiti; the 2011 earthquake and tsunami in Japan; and Superstorm Sandy of 2012. Emergency physicians frequently have extensive responsibilities for community and hospital-level disaster preparedness and response. This chapter discusses the definition of a disaster, disaster preparedness and planning, the hospital emergency operations plan, field disaster response, and the ED disaster response.

**[2] D.A Debal, T.M. Sitote, “Chronic kidney disease prediction using machine learning techniques”, Journal of Big Data 9, Nov 2022, 10.1186/s40537-022-00657-5**

Goal three of the UN’s Sustainable Development Goal is good health and well-being where it clearly emphasized that non-communicable diseases is emerging challenge. One of the objectives is to reduce premature mortality from non-communicable disease by third in 2030. Chronic kidney disease (CKD) is among the significant contributor to morbidity and mortality from non-communicable diseases that can affected 10–15% of the global population. Early and accurate detection of the stages of CKD is believed to be vital to minimize impacts of patient’s health complications such as hypertension, anemia (low blood count), mineral bone disorder, poor nutritional health, acid base abnormalities, and neurological complications with timely intervention through appropriate medications. Various researches have been carried out using machine learning techniques on the detection of CKD at the premature stage. Their focus was not mainly on the specific stages prediction. In this study, both binary and multi classification for stage prediction have been carried out. The prediction models used include Random Forest (RF), Support Vector Machine (SVM) and Decision Tree (DT). Analysis of variance and recursive feature elimination using cross validation have been applied for feature selection. Evaluation of the models was done using tenfold cross-validation. The results from the experiments indicated that RF based on recursive feature elimination with cross validation has better performance than SVM and DT.

**[3]K.M. Almustafa, “Prediction of chronic kidney disease using different classification algorithms”, Informatics in Medicine Unlocked, 2021, Volume 24, 100631, ISSN 2352-9148,** [**https://doi.org/10.1016/j.imu.2021.100631**](https://doi.org/10.1016/j.imu.2021.100631)**.**

Diabetes mellitus is a serious health issue in healthcare industry, which is a type of uncontrolled level of sugar. It is a chronic disease happened to the person who are having low insulin production and increase level of blood glucose because glucose is not properly utilized by body. In the medical field, predicting the correct diabetes is an important area that is under research to define a good predictive system to help the doctors to diagnose the disease. In the predictive system, feature selection plays on vital role to select the relevant feature for classification. There are several algorithms were applied on classification of diabetes data. In this proposed work, the features are transformed into high dimensional space before selection. So that the transformation of the features will give the better selection of attributes. With this effort, the proposed work implements the Kernel Principal Component Analysis for dimensionality reduction. KPCA will reduce the features space better than PCA. Once the features are transformed, the proposed work uses Genetic Algorithm to select the relevant and optimal features from the dataset. Then at the last Support Vector Machine is used as a classifier to classify the diabetes mellitus data. The proposed research on applying feature reduction before feature selection will reduce the irrelevant features that will improve the accuracy of the classification based on the selected relevant features. This proposed algorithm on diabetes mellitus data will compare with the existing algorithms to prove the effectives of the algorithm.

**[4]T. Nibareke, J. Laassiri, “Using Big Data-machine learning models for diabetes prediction and flight delays analytics Journal of Big Data, 2020, 7, pp1-18 10.1186/s40537-020-00355-0**

Nowadays large data volumes are daily generated at a high rate. Data from health system, social network, financial, government, marketing, bank transactions as well as the censors and smart devices are increasing. The tools and models have to be optimized. In this paper we applied and compared Machine Learning algorithms (Linear Regression, Naïve bayes, Decision Tree) to predict diabetes. Further more, we performed analytics on flight delays. The main contribution of this paper is to give an overview of Big Data tools and machine learning models. We highlight some metrics that allow us to choose a more accurate model. We predict diabetes disease using three machine learning models and then compared their performance. Further more we analyzed flight delay and produced a dashboard which can help managers of flight companies to have a 360° view of their flights and take strategic decisions.

**[5]M. Deepika and K. Kalaiselvi, “A Empirical study on Disease Diagnosis using Data Mining Techniques”, 2018 Second International Conference on Inventive Communication and Computational Technologies (ICICCT), 2018, pp. 615-620, doi: 10.1109/ICICCT.2018.8473185.**

Data mining is an essential part in learning disclosure process where intelligent agents are incorporated for pattern extraction. In the process of developing data mining applications the most challenging and interesting task is the disease prediction. This paper will be helpful for diagnosing accurate disease by medical practitioners and analysts, portraying various data mining techniques. Data mining applications in medicinal services holds colossal potential and convenience. However the efficiency of data mining techniques on healthcare domain depends on the availability of refined healthcare data. In our current study we discuss few classifier techniques used in medical data analysis. Also few disease prediction analysis like breast cancer prediction, heart disease diagnosis, thyroid prediction and diabetic are considered. The result shows that Decision Tree algorithm suits well for disease prediction as it produces better accuracy results.