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# HX8001 - PROFESSIONAL READINESS FOR INNOVATION, EMPLOYABILITY AND ENTREPRENEURSHIP

## PROJECT TITLE

**Domain of the Project :**
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# Objectives

- It is delicate to identify heart compliant because of se veral contributory threat similar as diabetes,high press ure,high cholestrol,abnormal palpitation rate and num erous other factors.
- The opinion of heart compliant is a grueling task,whi ch can offer automated vaticination about the heart co ndition of a case so that further treatment can be mad e effective.
- Among colorful life hanging conditions,heart complia nt has garned a great deal of attention in medical expl oration.

# Abstract


- Heart related conditions or Cardiovascular are the main reason for a huge number of death in the world over the last many decades and has surfaced as the most life han ging compliant not only in India but in the whole world
- So,there is a need for a dependable,accurate and doable system to diagnose similar conditions in time for prope r treatment.
- Data Analytics is useful for prediction from more infor mation and it helps the medical center to predict variou s diseases.

# Introduction

- The diagnosis of heart diseases is usually based on signs,symptoms of the patient.
- The severity of the disease is classified based on various methods like K-Nearest Neighbour Algorthim(KNN),Decision Tree(DT),Genetic Algorithm(GA) and Naïve bayes.
- The nature of heart disease is complex and hence, the disease must be handled carefully. Not doing so may affect the heart or cause premature death.
- Recently, many researchers have employed a number of machine learning techniques to aid the medical community and specialists in the detection of heart-related disorders.

# Literature Survey

| TITLE | AUTHOR & YEAR | JOURNAL NAME | REMARKS |
|---|---|---|---|
| Urban data management system: Towards Big Data analytics for Internet of Things | M. Babar, F. Arif, M. Jan, Z. Tan,F.Khan,2019 | Future Generation Computer Systems | Extensive experiments are in need to verify the performance of DEED. |
| | | | |
| A Comprehensive Review–IoT Applications for Big Data | M. Sarowar, M. Kamal, N. Dey,2019 | Theoretical and Applied Information Technology | a cloud framework that supports the dataset of records of the disease |

# Literature Survey

| TITLE | AUTHOR & YEAR | JOURNAL NAME | REMARKS |
|---|---|---|---|
| Investigating the adoption of big data analytics in healthcare | M. Shahbaz, C. Gao, L. Zhai, F. Shahzad, Y. Hu | Theoretical and Applied Information Technology | further studies can increase the sample size and apply this study model from a multicultural perspective |
| Development of Smart Healthcare System Based on Speech Recognition | Ismail, A., Abdlerazek, S., & El-Henawy, I. M. | IEEE | Future research is to apply this theoretical program to its data utilizing deep learning techniques. |

# Literature Survey

| TITLE | AUTHOR & YEAR | JOURNAL NAME | REMARKS |
|---|---|---|---|
| Hybrid genetic-discretized algorithm to handle data uncertainty in diagnosing stenosis of coronary arteries | Alizadehsani R, Roshanzamir M, Abdar M, Beykikhoshk | IEEE | an extension can be made by applying analysis to other bioinformatics diseases' datasets, and see the performance of these classifiers to classify and predict diseases. |
| Analysis and Prediction of Cardio Vascular Disease using Machine Learning | Komal Kumar Napa, G.Sarika Sindu | IEEE | random forest machine learning classifier has achieved a greater accuracy of 85.71% with a ROC AUC score of 0.8675 which outperformed all the classifiers under analysis in classifying patients with Cardio Vascular . |

# Literature Survey

| TITLE | AUTHOR & YEAR | JOURNAL NAME | REMARKS |
|---|---|---|---|
| Heart Disease Prediction using Machine Learning | N. Saranya, P. Kaviyarasu, A. Keerthana, C. Oveya. | IEEE | Future researchers should work towards improving the existing accuracies. They can create their own dataset using the existing datasets available in order to increase the sample size and allow predictive models to train on a larger dataset |
| Heart disease using machine learning. | Suraj Raut Rishabh Magar Rohan Memane | IJ Publication | The future work of this research study is to use more optimization techniques, feature selection algorithms, and classification algorithms to improve the performance of the predictive system for the diagnosis of heart . |

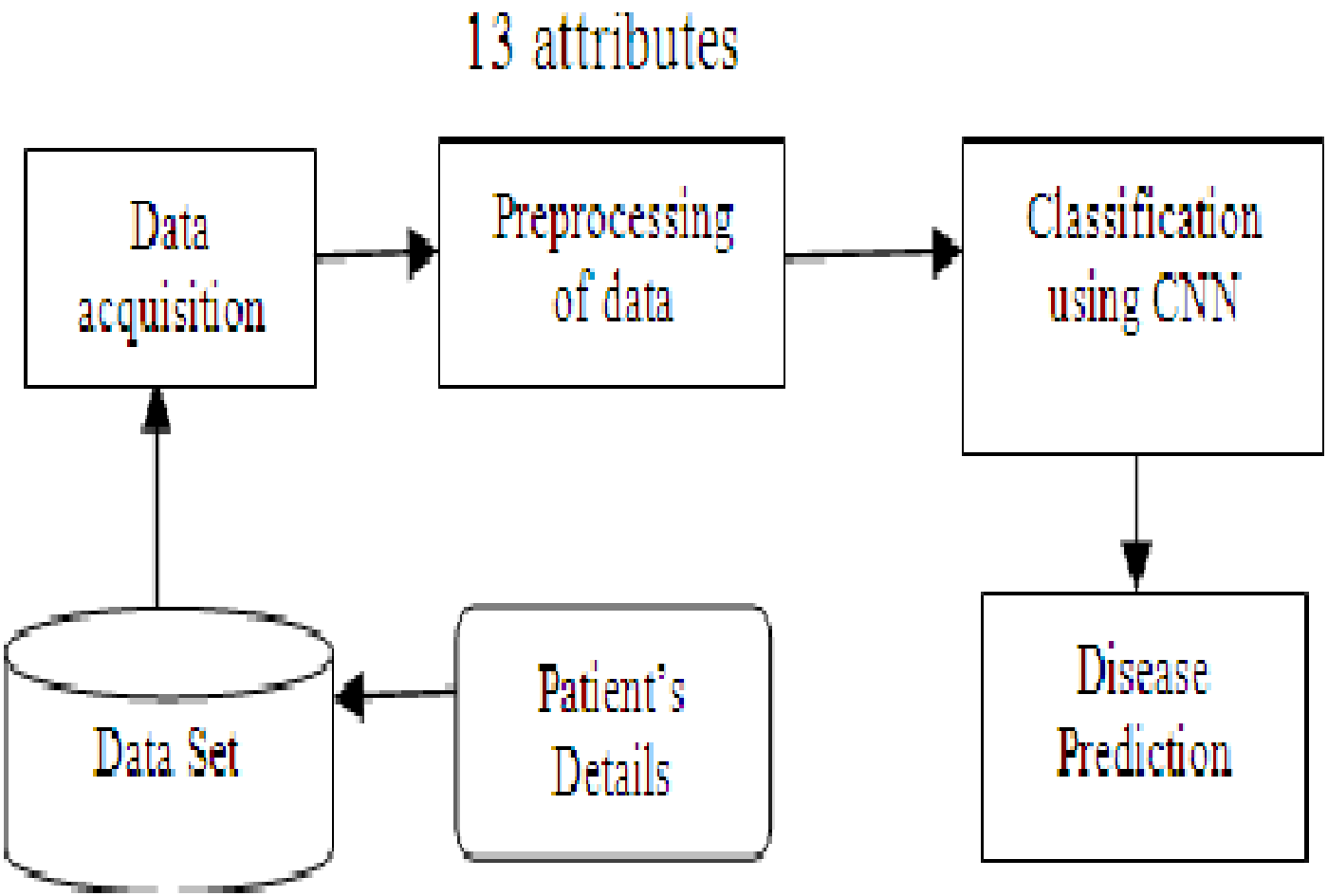
# Literature Survey

| TITLE | AUTHOR & YEAR | JOURNAL NAME | REMARKS |
|---|---|---|---|
| Heart disease prediction using machine learning algorithms | Harshit Jindal et al | IEEE | Special focus should be put towards removing false positives and false negatives from the existing models. The predictive models should be accessible to the people in the form of a web or a mobile application so that people can try to be aware of their heart condition |
| Machine learning algorithms for predictingcoronary artery disease | Akella, Aravind and Akella, Sudheer. | IEEE | further studies should include data from other HCV cohorts and perhaps consider other disease features to clearly discern the disease state of the HCV patients. |

# Problem Identification

- As we all know, buttons are the most common interface to interact with the digital world.
- To avoid the risk of getting Heart diseases, therefore,there needs to be work done to help prevent the risks of having heart problems.This tends to reduce and analyse the heart problems for the future of the world.
- By using these types of gesture control everywhere we can reduce the spread of this heart problems significantly.

# Block Diagram



# References


1 M. Kavitha; G. Gnaneswar; R. Dinesh; Y. Rohith Sai; R. Sai Suraj , “Heart Disease Prediction using Hybrid machine Learning Model”, 6th International Conference on Inventive Computation Technologies (ICICT), ISBN:978-1-7281-8501-9, DOI: 10.1109/ ICICT50816.2021. 9358597, IEEE India, 2021.

2 A. Sankari Karthiga, Dr. M. Safish Mary, Research Scholar, Assistant Professor, Department of Computer Science, Manonmaniam Sundaranar University, Abishekapatti, Tirunelveli, Department of Computer Science, St.

3 Haolin Wang; Zhilin Huang; Danfeng Zhang; Johan Arief; Tiewei Lyu; Jie Tian, “Integrating Co-Clustering and Interpretable Machine Learning for the Prediction of Intravenous Immunoglobulin Resistance in Kawasaki, 10.1109/ACCESS.2020.2996302, ISSN: 2169-3536, IEEE, Volume: 8, May 2020

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4 Haixia Li 1, Guofeng Ren1, Xiaopu Yu2, Dongying Wang2,And Shizhe Wu3, “Discrimination of the Diastolic Murmurs in Coronary Heart Disease and in Valvular Disease”, 1Department of Electronics, Xinzhou Teachers University, Xinzhou 034000, China, 2Shanxi Medical University of China, Taiyuan 035100, China, 3Taiyuan Zhida Ivy League Middle School, Taiyuan 030006, Digital Object Identifier 10.1109/ACCESS.2020.3021093, China, September 2020.

5 Yiwen Meng; William Speier; Chrisandra Shufelt; Sandy Joung; Jennifer E Van Eyk; C. Noel Bairey Merz; Mayra, “A Machine Learning Approach to Classifying Self-Reported Health Status in a Cohort of Patients With Heart Disease Using Activity Tracker Data” , IEEE Journal of Biomedical and Health Informatics , ISSN: 2168-2208, Volume: 24, Issue: 3, March 2020.

# Questions & Discussion

# THANK YOU