1 INTRODUCTION

1.1 Overview

For many years, heart disease has been found to be the most common disease in people of all ages. The World Health Organization has identified it as the most serious threat . Heart attacks, strokes, and other circulatory diseases are confirmed to be the leading cause of 41 percent of deaths in the real world. The European Public Health Alliance surveyed and proved this. As a result, it is even more critical to accurately predict the occurrence of heart disease while taking into account the various security threats.

1.2 Purpose

The main challenge in today's healthcare is to provide high-quality services and accurate diagnoses. Even though heart disease has been identified as the leading cause of death worldwide in recent years, it is also one of the diseases that can be effectively controlled and managed. The entire accuracy in disease management is dependent on the proper time of disease detection. The proposed work aims to detect these heart diseases at an early stage in order to avoid disastrous consequences.

2 LITERATURE SURVEY

2.1 Existing problem

Cardiovascular diseases (CVDs) are the number 1 cause of death globally, taking an estimated 17.9 million lives each year, which accounts for 31% of all deaths worldwide.

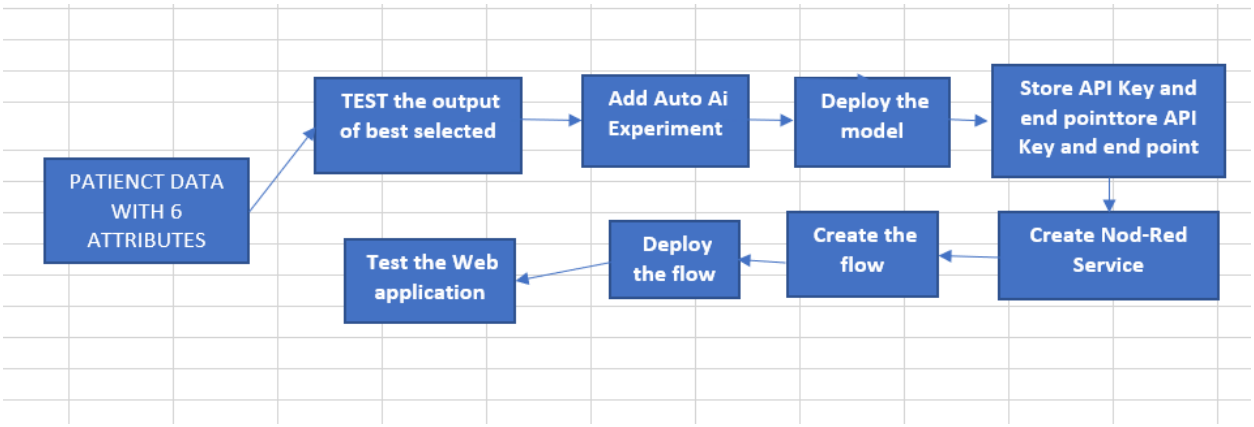
Heart failure is a common event caused by CVDs and this dataset contains 9 features that can be used to predict mortality by heart failure

2.2 Proposed solution

In order toshowcase the prediction of heart failure we have build a model using Auto AI an a web application.The health professional enters the input values from the patient's health report. The data is fed into model which predicts the probability of having heart disease

3 THEORITICAL ANALYSIS

3.1 Block diagram



3.2 Hardware / Software designing

The hardware required for the development of this project is:

i. Processor : 11th Gen Intel(R) Core (TM) i5-1135G7

ii. Processor speed : 2.40GHz

iii. RAM Size : 8.00 GB

iv. System Type : 64-bit operating system, x64-based processor

4 EXPERIMENTAL INVESTIGATIONS

Risk factors are the most prominent factors in the risk factor selection process, which must be well focused for accurate and early prediction of heart disease. There are up to 300 risk factors for coronary heart disease that have already been identified. The detection of these

risk factors would improve the prediction rate of heart disease. Various researchers have previously introduced various research methods that focus on risk factor prediction. These research methods are discussed in this section. The authors used non linear classifiers, specifically non linear support vectors, to perform risk factor presence analysis in various types of disease databases.

5 FLOWCHART

6 RESULT

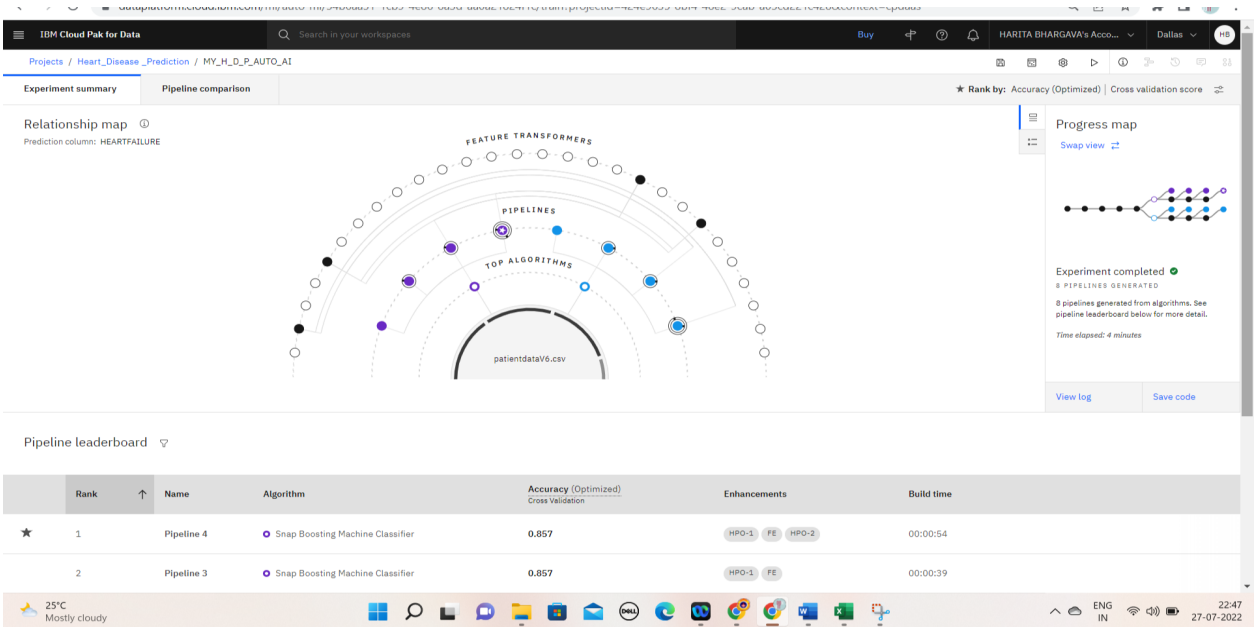


Fig : Experiment Summary

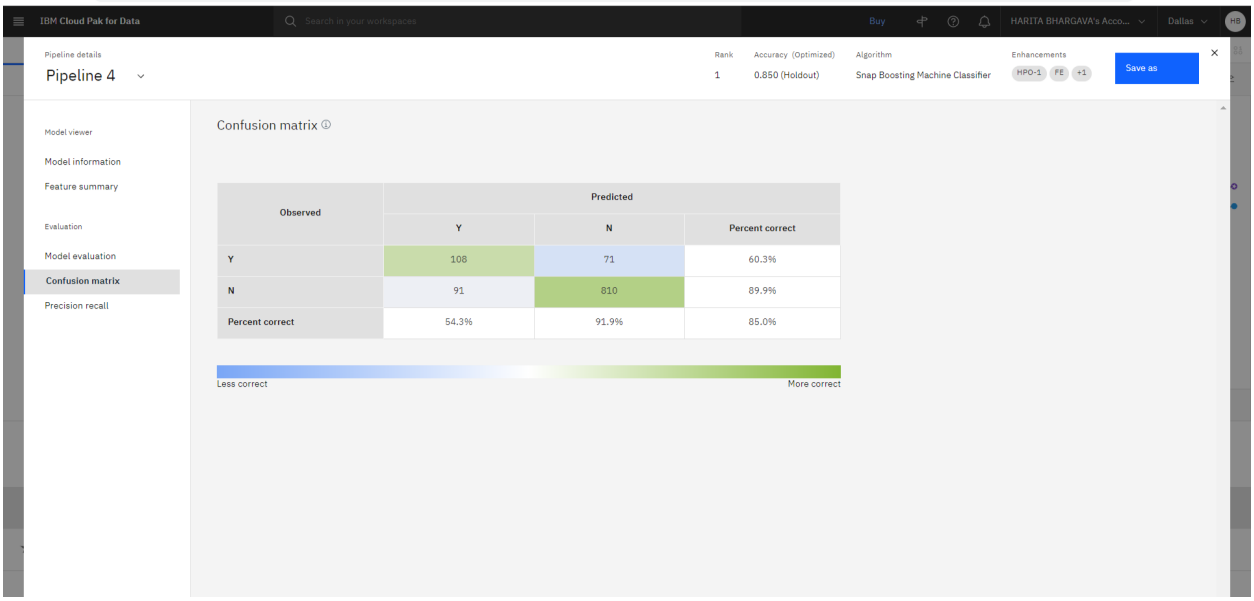


Fig : Confusion Matrix

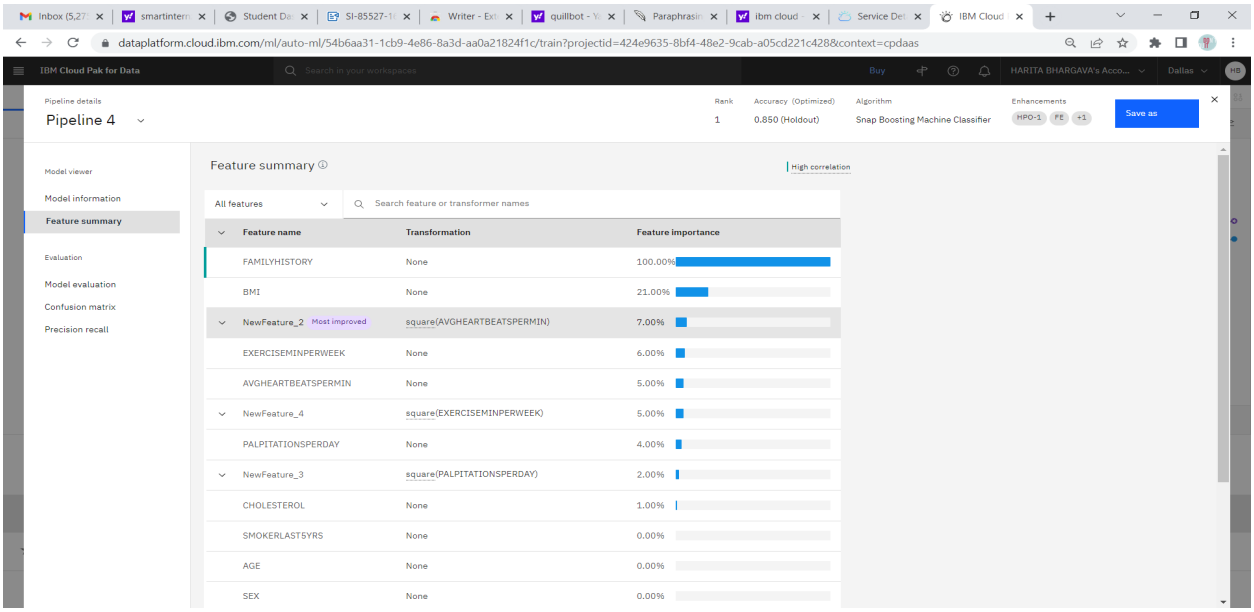


Fig : Feature Summary

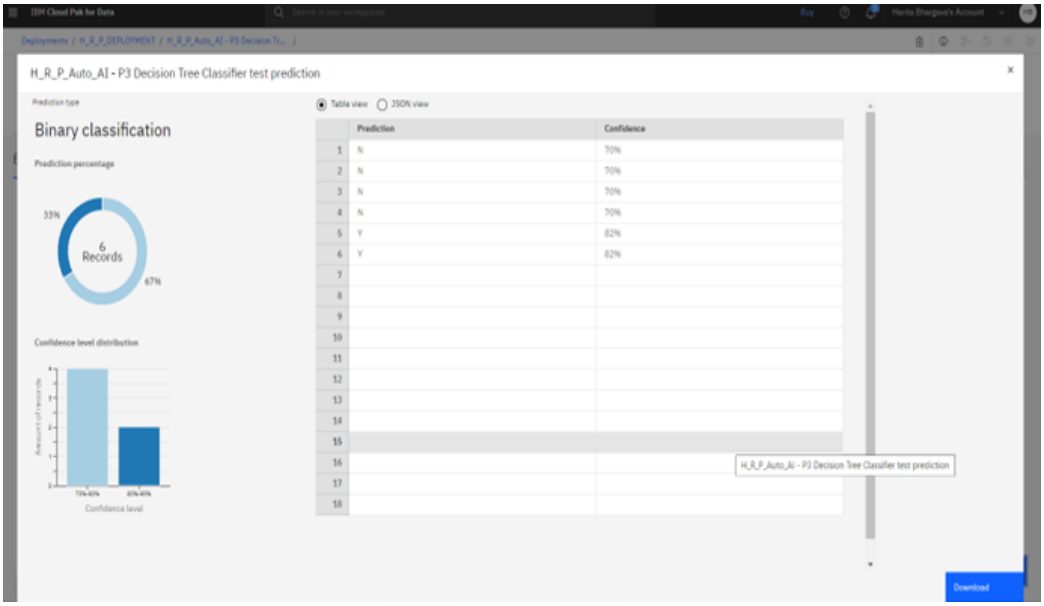


Fig : Table view Output of the Prediction Column i.e Heart Failure

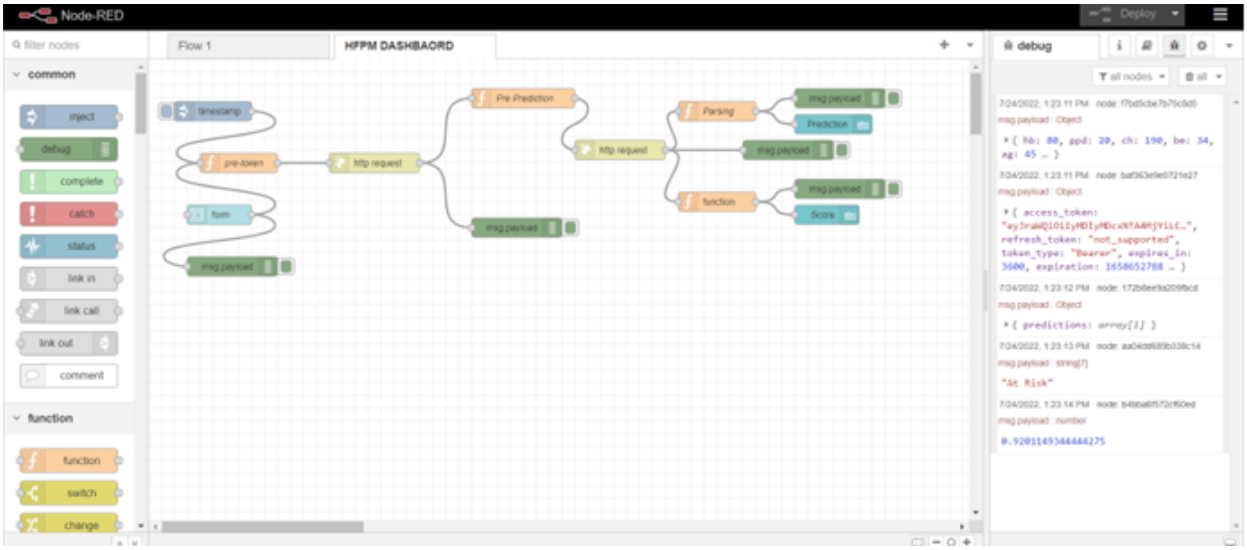


Fig : Outputof the Prediction Column i.e Heart Failure

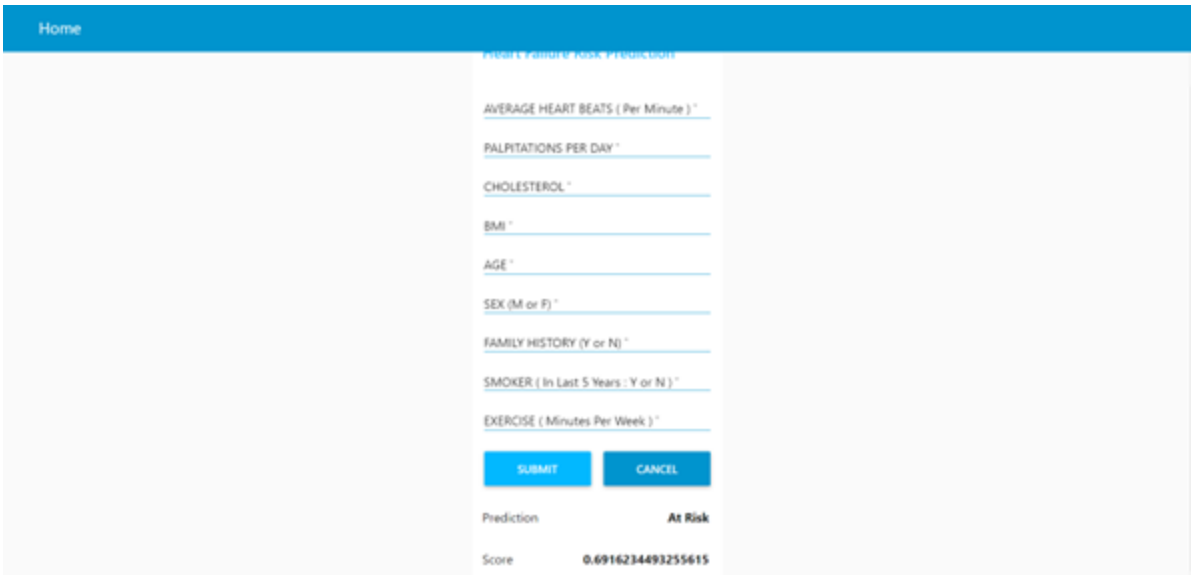


Fig : Final Output of the Prediction Column i.e Heart Failure

7 ADVANTAGES & DISADVANTAGES

ADVANTAGES

1. User can search for doctor’s help at any point of time.
2. Usercan talk about their Heart Disease and get instant diagnosis.
3. Doctors get more clients online.

4. Very useful in case of emergency.

DISADVANTAGES

1. Accuracy Issues:A computerized system alone does not ensure accuracy, and thewarehouse data is only as good as the data entry that created it.

2. The system is not fully automated, it needs data from user for full diagnosis.

8 APPLICATIONS

This application is available to all patients and family members who require emergency assistance.

9 CONCLUSION

Heart disease prediction is the most important research topic being pursued by various researchers in order to perform early prediction of heart disease. Several research methods for accurately predicting heart disease have been introduced previously. Multiple existing research methodologies have been discussed in terms of their working procedure and the performance metrics used in this research analysis paper. This analysis work also provides an overview of their working procedure as well as the benefits and drawbacks of those research methodologies. This work presents a sectionalized discussion of heart disease prediction. These are novel feature selection techniques, as well as procedures for identifying and predicting risk factors. These research methods are defined and highlighted, along with their flaws and benefits. The overall review of the research methods was carried out in the matlab simulation environment, from which it was discovered that the research methodologies could be improved. This evaluation was carried out based on the benefits and drawbacks of the research methods that were discussed.

10 FUTURE SCOPE

The proposed system is graphical user interface (GUI)-based, user-friendly, scalable, reliable, and expandable. By providing initial diagnostics on time, the proposed working model can also help to reduce treatment costs. The model can also be used as a training tool for medical students and as a soft diagnostic tool for physicians and cardiologists. This tool can be used by general practitioners to make an initial diagnosis of cardio patients. There are numerous improvements that could be investigated in order to improve the scalability and accuracy of this prediction system. We can use this system to analyse different data sets in the future because we created a generalised system.

11 BIBILOGRAPHY

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APPENDIX