INTERNSHIP

PROJECT TITTLE:-
Chronic Kidney Disease Predication using Watson Auto AI

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INTRODUCTION

Chronic Kidney Disease(CKD) meqans your kidneys are damaged and can't filter blood thr way they should.
It is a major medical problem and can be cured if only treated it in the early stages.Usually,people are not aware that medical tests,we take for different purposes could contain helpful information about the disease.
The information says that it helps us to measure the severity of the problem,the prediced survial of the patient after the illness,the pattern of the disease and work for curing the disease.this project focus on the automatic classification of the patients may haiving chronic kidney Disease symptons based on the their medical records.

Purpose of the Model

It is very helpful in medical Field.Using the moel trained database ,It would be easily diagnosing patients condition based on the easily features like age,wbc,sg,rbc,hemoglobin,bloodpressure(bp) from these features it give prediction
the person have ckd and notckd.

STEPS FOR BUILDING THE MODEL

1. Download the dataset kidney_disease.csv from kaggle.

2.Preprocess and analyze the dataset to get required feature sets in this case I have taken sg,al ,hemo,pcv,htn,bp etc.

3.Create an IBM watson studio service in cloud.ibm.com

4.Create a machine learning service instance

5.Create a new project and create an auto AI Enviroment.

6.import the datasert kidney_disease.csv

7.Bulid the model by training and select the most accurate model and save the model.

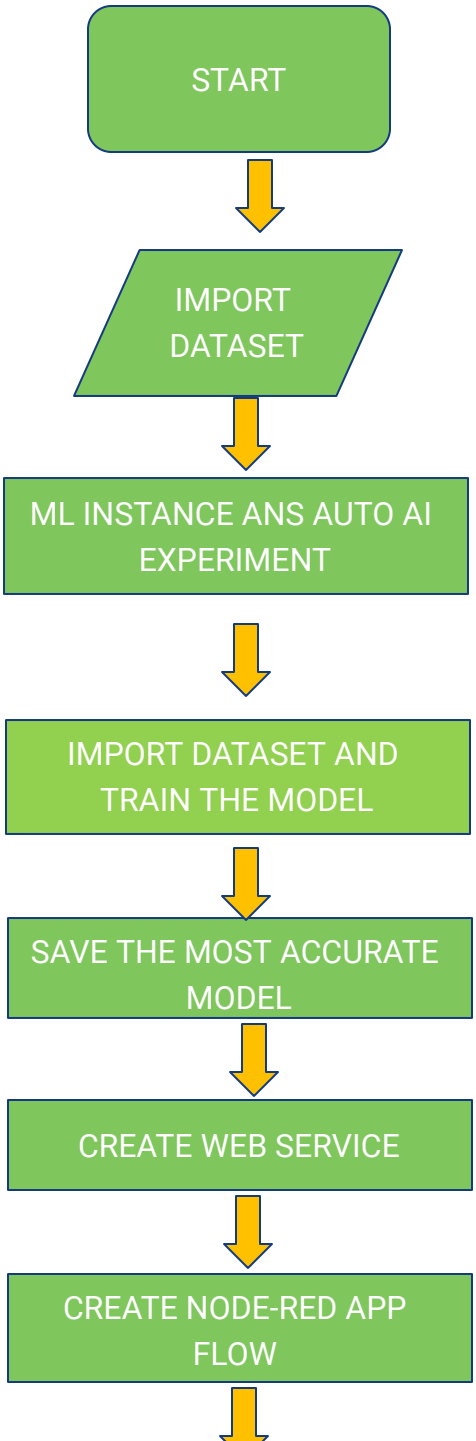
8.Deploy the selected model and test it with custom inputs.

9.Create a new Node-red app service for creating a UI for the model.

10.By creating required templates and customize it.

11.Deploy the UI and test it.

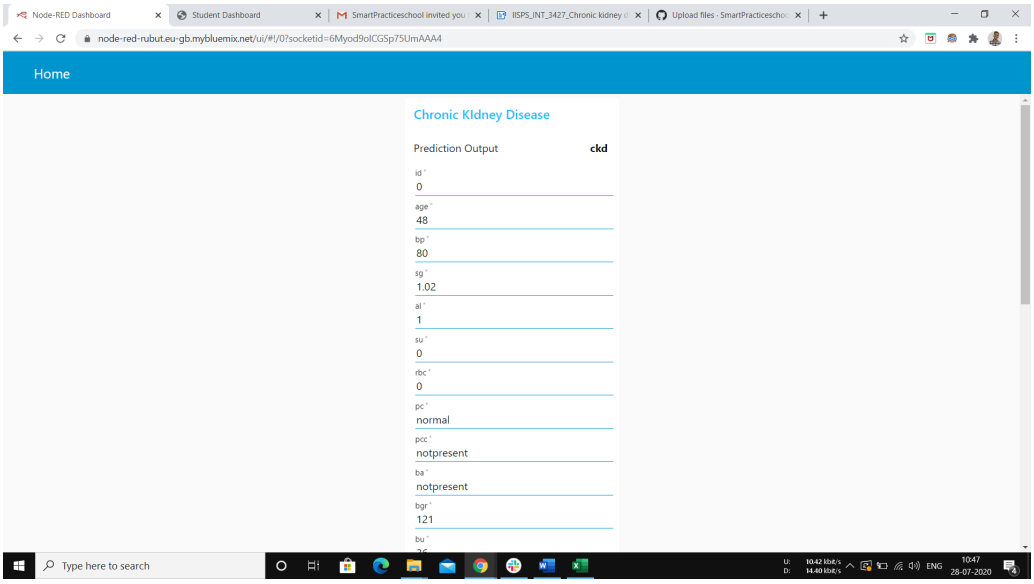
Flow Chart


START
IMPORT DATASET
ML INSTANCE ANS AUTO AI EXPERIMENT
IMPORT DATASET AND TRAIN THE MODEL
SAVE THE MOST ACCURATE MODEL
CREATE WEB SERVICE
CREATE NODE-RED APP FLOW

Result

The user should enter the credentials required for predication.The predication of chronic kidney Disease patient will be displayed on the screen.

Output screen



Advantages

1. Predict with certainity
2. Efficient output with maximum accuracy
3. Faster and Reliable.
4. Can prevent loss of data
5. Can Perform even with large number of suspects.

Disadvantages

1. Requires stable network connection.
2. May lead to overfitting.
3. Requires server which process heavy loads.
4. Model should be trained properly.

Application

1. Virtual Personal Assistants-Siri,Alexa,Google Now are some popular examples.
2. Predication while commuting
3. Videos Surveillance
4. Social Media Services
5. Email Spam and Malware Filtering
6. Online Customer Support
7. Search Engine Result Refining
8. Product Recommendations

Conclusion

I would like to conclude that,it is immense learning experience while preparing the project.Model is built using IBM Watson Auto AI Machine Learning Service.The model is deployed on IBM cloud to get scoring end point which can we used as API in mobile app or web app building.A web application is built Using Node Red

Service.Used the scoring end point to give user input values to the deployed model.This model is to find whether the patient is affected by chronic kidney Disease or not by taking the information of various tests.Finally,the result is obtained as ckd or notckd which gives information whether the patient is suffering from chronic kidney failure or not.So,that further measures can be taken.