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DELHI TECHNICAL CAMPUS

(Affiliated Guru Gobind Singh Indraprastha University, New Delhi)

Greater Noida

Name of the Department:

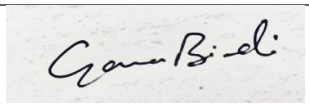
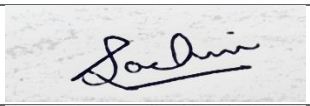
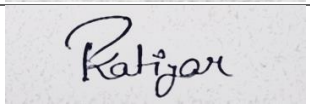
B.Tech. Computer Science Engineering

Synopsis of Project

Project Title: Disease Prediction Management System and Blood Donor Registry

Project Guide: Ms. Upasna Joshi

Project Team:

	Programme: - B.Tech. CSE	**Year/Semester: - 4th Year/ 8th Semester**	
S. No.	Enrolment No.	Name	Signature
1.	01918002718	Gaurav Birdi	
2.	03018002718	Md. Omer	
3.	04418002718	Sachin Sharma	
4.	40118002718	Prakhar Katiyar	

Project Summary/Introduction:

Now a days, people face various diseases due to the environmental condition and their living habits. So the prediction of disease at earlier stage becomes important task. But the accurate prediction on the basis of symptoms becomes too difficult for doctor. The correct prediction of disease is the most challenging task. To overcome this problem data mining plays an important role to predict the disease. Medical science has large amount of data growth per year. Due to increase amount of data growth in medical and healthcare field the accurate analysis on medical data which has been benefits from early patient care. With the help of disease data, data mining finds hidden pattern information in the huge amount of medical data. We proposed general disease prediction based on symptoms of the patient.

Disease Prediction helps patients to identify the risk of disease or health conditions. In present scenario, due to the pandemic people feel unsafe to visit the hospital and if patient is not serious and just wants to identify the type of ailment, disease prediction plays a key role. Therefore, a need for a system arises with the help of which users/patients can diagnose the disease on the basis of symptoms that they are facing, which would give them an awareness of the disease they are suffering from, medication needed, specific doctor to be consulted and further avoiding potential hospital admissions.

In addition to this finding blood donors and especially those have rare blood group is even more difficult. Therefore a need for a Blood Group Registry arises where people can register themselves as voluntary donor and even could find other blood donors in case they require blood. There is a need for this system in institution, universities as people from various parts of the country and even abroad come to study and there is a greater chance of finding rare blood groups.

Problem Statement:

Predicting a Disease is a time consuming task which can slow down the treatment, so to countering that problem there is a need for a system which can predict and maintain the diseases at a much faster rate.

- Delay in treatment will lead to consequences.
- Early prediction of a disease can save a number of lives.

Literature survey:

S. No.	Title	Objective	Key Points	Published By
1.	Web based disease prediction system and recommendation system	The research effort centralizes on the efforts of implementing an application that employs computer algorithms which in turn results in developing a low-cost interface device for interacting with objects in virtual environment using disease management.	Disease Prediction Interacting with virtual objects Working with virtual environment Disease Tracking	Harish Rajora, N. Punn, S. K. Sonbhadra, Sonali Agarwal [1]
2.	BagMOOV: A novel ensemble for heart disease prediction bootstrap aggregration	This project's objective is to analyze and predict the heart disease bootstrap system.	Environment for Disease prediction Modeling of system for heart disease.	S. Bashir, U. Qamar, F.H. Khan [2]

3.	Survey on heart disease prediction system using data mining technique	An in-depth survey has been carried out to look at the present state of data relating to Disease prediction systems that explicitly focused on the heart disease using mining technique	Artificial Prediction System Data Mining Technique	Amruta Powar, V.G. [3]
4.	Disease prediction and drug recommendation android application using data mining (virtual doctor)	In this work mel frequency cepstral coefficients (MFCC) based features are extracted for each training and testing sample of Deaf-mute speech.	MFCC HTK V2M application	Vivek Mudaliar, P.Savaridaasan, S.G. [4]

Objective:

Our Objective is to create a Disease Prediction Management System and Blood Donor Registry, it will work towards predicting and maintaining a database of diagnosis of the registered users.

Disease prediction system along with Blood Donor registry can not only predict disease but also provide a platform to register people with routine and rare groups simultaneously.

These donors will be enlisted as ‘ Life Saving Blood Links’ so that when a need for blood type arises, they can be called upon to donate blood. This in turn will contribute in saving life of hundreds or thousands of such unique and needy patients and strengthen the Blood transfusion services within the country.

Rare blood groups like O_h, A_{int}, A_2, A_3, A_m, A_x, A_{el}, B_3, B_m , B_x , Rh_{null} (Golden Blood)

Resource requirement (Hardware & software etc.):

Hardware Required:

- Laptop/PC
- Processor: i5 9100F/Ryzen 5 3600H or any Processor with at least 4.00ghz
- Ram: 8GB.
- Storage: 1TB.
- OS: Windows/Linux/Mac

Software Required:

- Python3.7
- NumPy Library
- Visual Studio Code
- MySQL
- XML
- Kaggle Dataset

Impact of Proposed project on the Body of Knowledge and its relevance to Academia/industry:

This project can help in various different sectors, some of the applications are:

- In present scenario, due to the pandemic people feel unsafe to visit the hospital and if patient is not serious and just wants to identify the type of ailment, disease prediction plays a key role.
- Trainee medical practitioner can use this software for learning purposes and for assistance in diagnosis.
- Disease will be diagnosed at early stages leading to quicker treatments.

References:

[1] Harish Rajora, N. Punn, S. K. Sonbhadra, Sonali Agarwal "Web based disease prediction and recommender

system" Indian Institute of Information Technology, Allahabad, India,June 2021

[2] S. Bashir, U. Qamar, F.H. Khan, "BagMOOV: A novel ensemble for heart disease prediction bootstrap aggregation" Australasian Physical & Engineering Sciences in Medicine, Springer, vol. 38, pp. 305-323, 2015.

[3] Amruta Powar, V.G.: Survey on heart disease prediction system using data mining technique. International

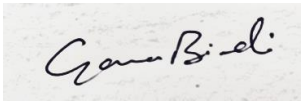
Journal of Innovations in Engineering Research and Technology 4 (2017)

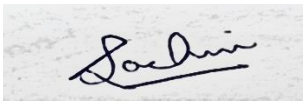
[4] Vivek Mudaliar, P.Savaridaasan, S.G.: Disease prediction and drug recommendation android application using data mining (virtual doctor). International Journal of Recent Technology and Engineering 8 (2019)

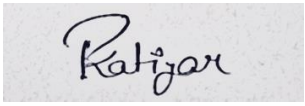
[5] Shawni Dutta, S.K.B.: A approach for hepatitis disease detection. International Journal for Research in Applied Sciences and Biotechnology 7 (2020)

[6] Mohan Kumar K N, S.Sampath, Mohammed Imran "An Overview on Disease Prediction for Preventive Care of Health Deterioration" International Journal of Engineering and Advanced Technology (IJEAT) ISSN: 2249 – 8958,Volume-8, Issue-5S, May 2019

Signature(s) of Project Team Member(s)







Name and Signature of Project Guide

(Ms. Upasna Joshi)