Statistical Machine Learning Approaches to Liver Disease Prediction

Project Design Phase-I - Solution Fit

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1 Who is your customer? Doctors, health care industries related people, almost everyone who needs to predict they have liver disease or not.

2 JOBS-TO-BE-DONE / PROBLEMS

Liver diseases avert the normal function of the liver. Mainly due to the large amount of alcohol consumption liver disease arises.Discovering the existence of liver disease at an early stage is a complex task for the doctors.

4 EMOTIONS: BEFORE / AFTER

Very satisfied, happier, healthier due to earlier and accurate prediction of liver diseases.

6 BEHAVIOUR

Use our project to examine data from liver patients concentrating on relationships between a key list of liver enzymes, proteins, age and gender using them to try and predict the likeliness of liver disease. Here we are building a model by applying various machine learning algorithms find the best accurate model. And integrate to flask based web application. User can predict the disease by entering parameters in the web application.

3 TRIGGERS

Early prediction of liver disease using classification algorithms is an efficacious task that can help the doctors to diagnose the disease within a short duration of time. Discovering the existence of liver disease at an early stage is a complex task for the doctors. The main objective of this project is to analyze the parameters of various classification algorithms and compare their predictive accuracies so as to find out the best classifier for determining the liver disease.

5 AVAILABLE SOLUTIONS

Phan and Chan et al. demonstrated that a convolutional neural network (CNN) model predicted liver cancer in subjects with hepatitis with an accuracy of 0.980 . The ANN model has been used to predict liver cancer in patients with type 2 diabetes . Neural network ML methods can help differentiate between types of liver cancers when applied to imaging data sets

8 CHANNELS of BEHAVIOUR

8.1 Online
Login into our website to predict presence of liver disease.

8.2 Offline
Visit doctors personally and doctor will predict accurately with the help of our website with extra features and study compared to common people as extra features are provided to the people in health care industries.

9 PROBLEM ROOT CAUSE

Liver diseases avert the normal function of the liver. Mainly due to the large amount of alcohol consumption liver disease arises.Discovering the existence of liver disease at an early stage is a complex task for the doctors.

10 YOUR SOLUTION

Examines data from liver patients concentrating on relationships between a key list of liver enzymes, proteins, age and gender using them to try and predict the likeliness of liver disease. Here we are building a model by applying various machine learning algorithms find the best accurate model. And integrate to flask based web application. User can predict the disease by entering parameters in the web application