Statistical Machine Learning Approaches to Liver Disease Prediction

SPRINT -4

HOME.HTML:

```
<html>
<head>
<title>HOME PAGE </title>
<h1> Statistical Machine Learning Approaches To Liver Disease Prediction  </h1>
</head>
<center>
<body>
<img src="Liver.jpg">
<section id="main">
      <nav>
        <span class="menu-space"></span>
        <h1> PATIENT ANALYSIS </h1>
        <ul class="menu">
          <li><a href="file:///C:/Users/S.SANJAY/Downloads/home2.html">LIVER DISEASE</a></li>
          <li><a href="file:///C:/Users/S.SANJAY/Desktop/IBM/prediction.html">Go to Predict</a></li>
        </ul>
      </nav>
  </section>
<br>
<br>
<h3>INTRODUCTION</h3>
<p>Liver diseases averts the normal function of the Liver. Mainly due to the large amount of alcohol consumption liver diseas arises. Early prediction of Liver disease using classifcation
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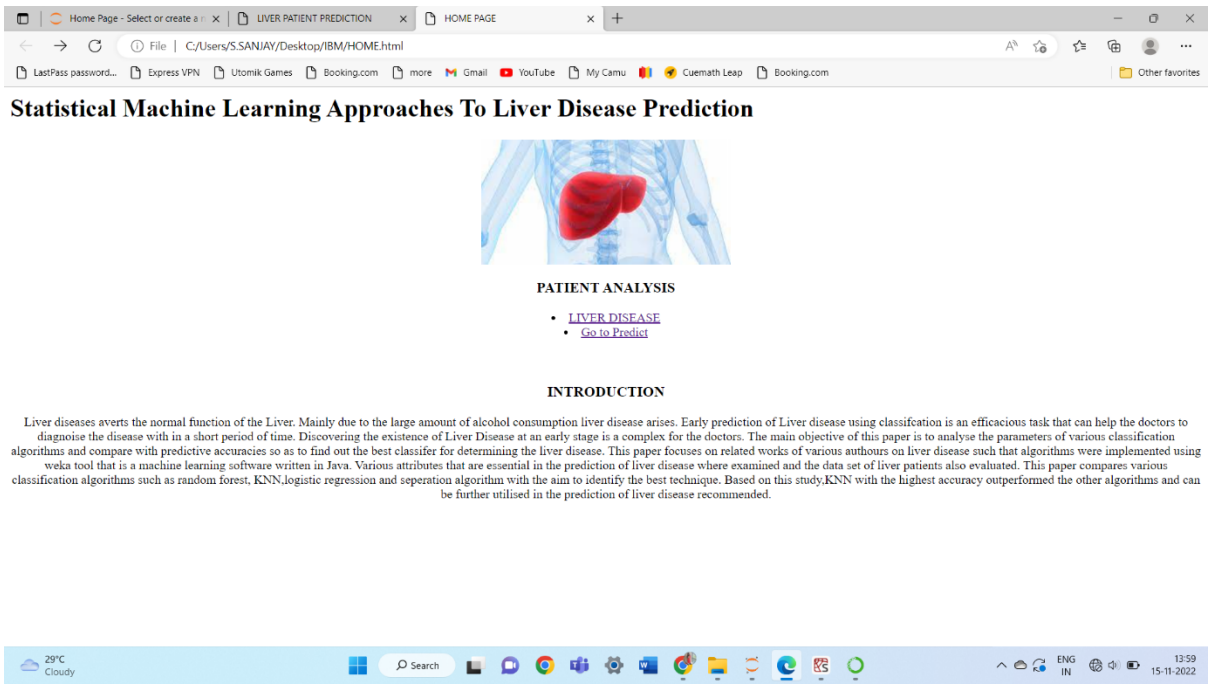
is an efficacious task that can help the doctors to diagnoise the disease with in a short period of time. Discovering the existence of Liver Disease at an early stage is a complex for the doctors. The main objective of this paper is to analyse the parameters of various classification algorithms and compare with predictive accuracies so as to find out the best classifer for determining the liver disease. This paper focuses on related works of various authours on liver disease such that algorithms were implemented using weka tool that is a machine learning software written in Java. Various attributes that are essential in the prediction of liver disease where examined and the data set of liver patients also evaluated. This paper compares various classification algorithms such as random forest, KNN, logistic regression and seperation algorithm with the aim to identify the best technique. Based on this study, KNN with the highest accuracy outperformed the other algorithms and can be further utilised in the prediction of liver disease recommended.

‹/body›

‹/center›

‹/html›

OUTPUT:



home2.HTML:

```
‹Html›
‹head›
‹style›
body {
  background-image: url('https://media.istockphoto.com/id/1414176792/photo/top-view-photo-of-pink-silk-ribbon-symbol-of-breast-cancer-awareness-and-stethoscope-on.jpg?s=612x612&w=0&k=20&c=7sjsU3Xu_kmxV349N-_LxWEAjYC8cBWkAFvW5lF3WfA=');
  background-repeat: no-repeat;
  background-attachment: fixed;
  background-size: cover;
}
‹/style›
‹/head›
‹body›
‹title›home ‹/title›
‹h1›‹b›LIVER DISEASE ‹/b›‹/h1›‹/head›
‹body›
‹h3›‹b›SYMTOMS:‹/b›‹/h3›
‹p›1.Skin and eyes that appear yellowish (jaundice)‹br›
  2.Abdominal pain and swelling‹br›
  3.Swelling in the legs and ankles‹br›
  4.Itchy skin‹br›
  5.Dark urine color‹br›
  6.Pale stool color‹br›
  7.Chronic fatigue‹br›
  8.Nausea or vomiting‹br›
  9.Loss of appetite‹br›
  10.Tendency to bruise easily‹br›‹/p›‹br›
‹h3›‹b›TOTAL BILIRUBIN: ‹/b›‹/h3›
```

‹p›This is a blood test that measures the amount of a substance called bilirubin. This test is used to find out how well your liver is working. It is often part of a panel of tests that measure liver function. A small amount of bilirubin in your blood is normal, but a high level may be a sign of liver disease.‹/p›

‹h3›‹b›DIRECT_BILIRUBIN:‹/b›‹/h3›

‹p›In the liver, bilirubin is changed into a form that your body can get rid of. This is called conjugated bilirubin or direct bilirubin. This bilirubin travels from the liver into the small intestine. A very small amount passes into your kidneys and is excreted in your urine. This bilirubin also gives urine its distinctive yellow color.‹/p›‹br›

‹h3›‹b›ALKALINE_PHOSPHOTASE:‹/b›‹/h3›

‹p›An alkaline phosphatase level test (ALP test) measures the amount of alkaline phosphatase enzyme in your bloodstream.‹/p›‹br›

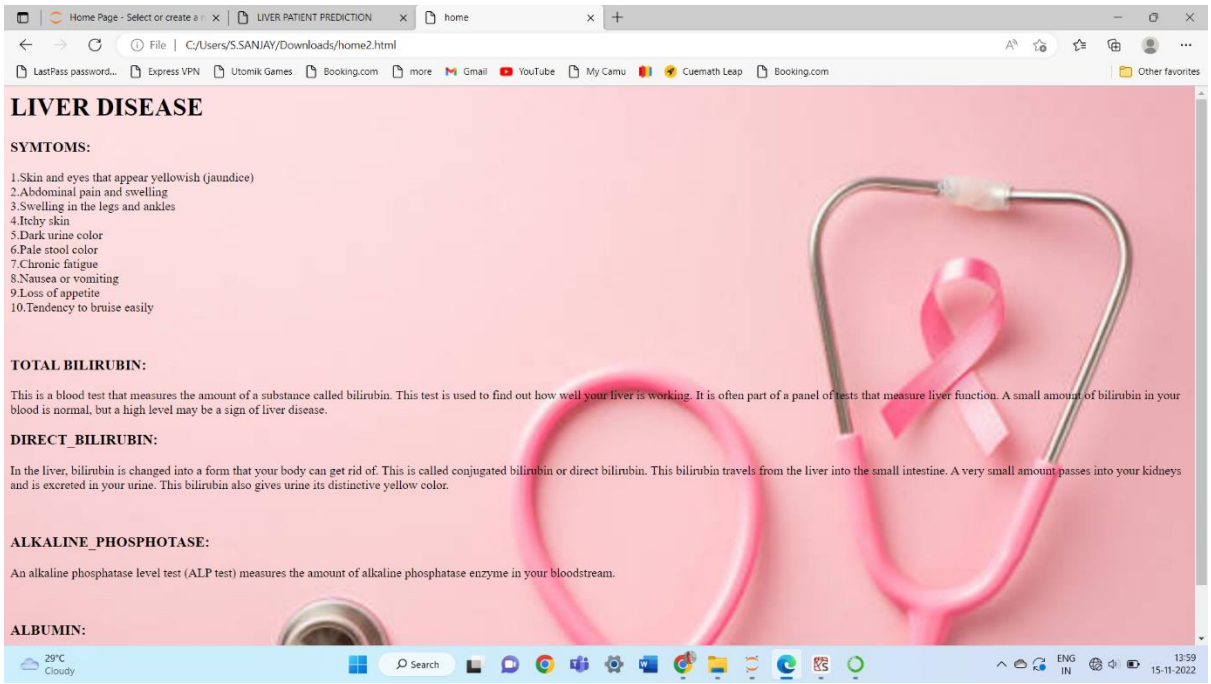
‹h3›‹b›ALBUMIN:‹/b›‹/h3›

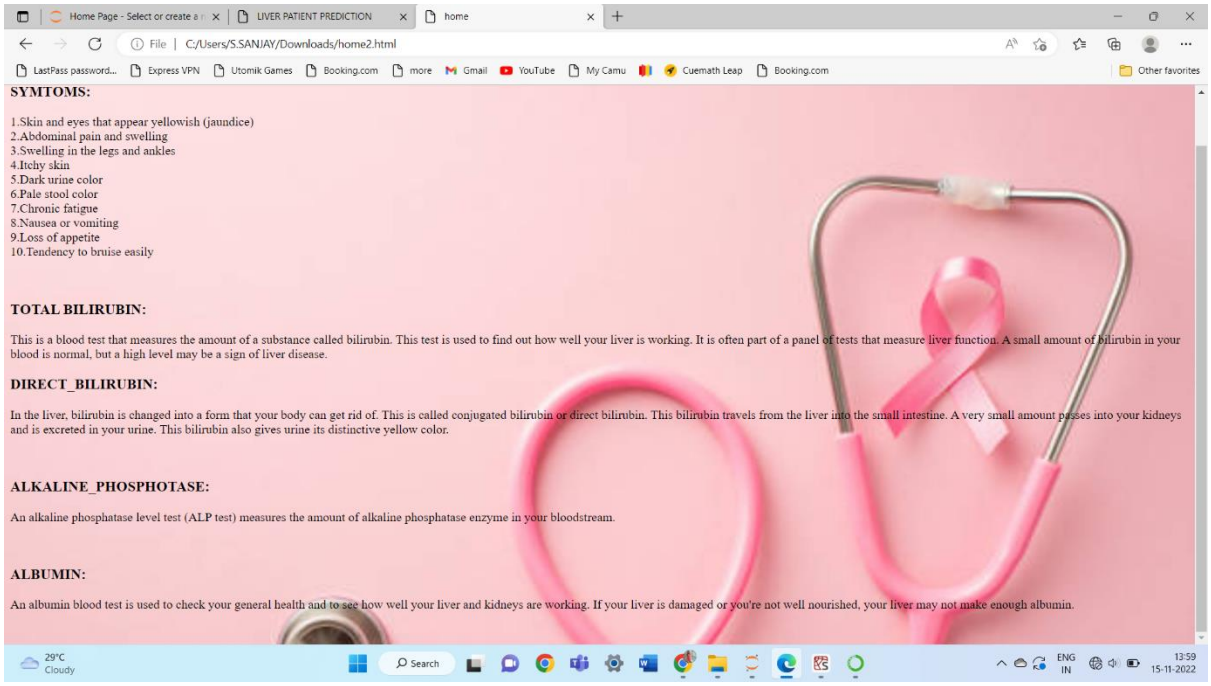
‹p›An albumin blood test is used to check your general health and to see how well your liver and kidneys are working. If your liver is damaged or you're not well nourished, your liver may not make enough albumin.‹/p›‹br›

‹/body›

‹/html›

OUTPUT:





Prediction.html:

‹Html›

‹head›

‹title› LIVER PATIENT PREDICTION ‹/title›

‹h1› Prediction page: ‹/h1›

‹h2›‹center›LIVER PATIENT PREDICTION‹/center›‹/h2›

‹/head›

‹center›

‹body›

‹img src="LiverDisease.jpg"›

‹br›

‹br›

‹form›

‹label› Age: ‹/label›

‹input type="text" name="age" size="20"/› ‹br› ‹br›

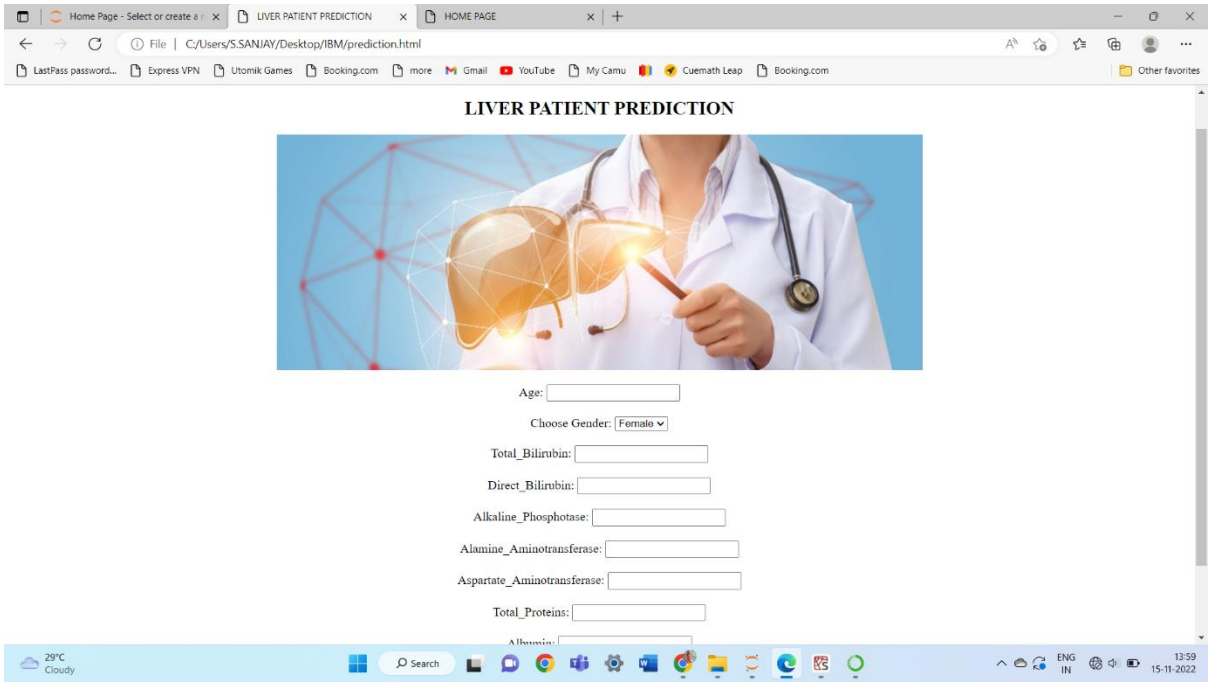
‹label for="Gender"›Choose Gender:‹/label›

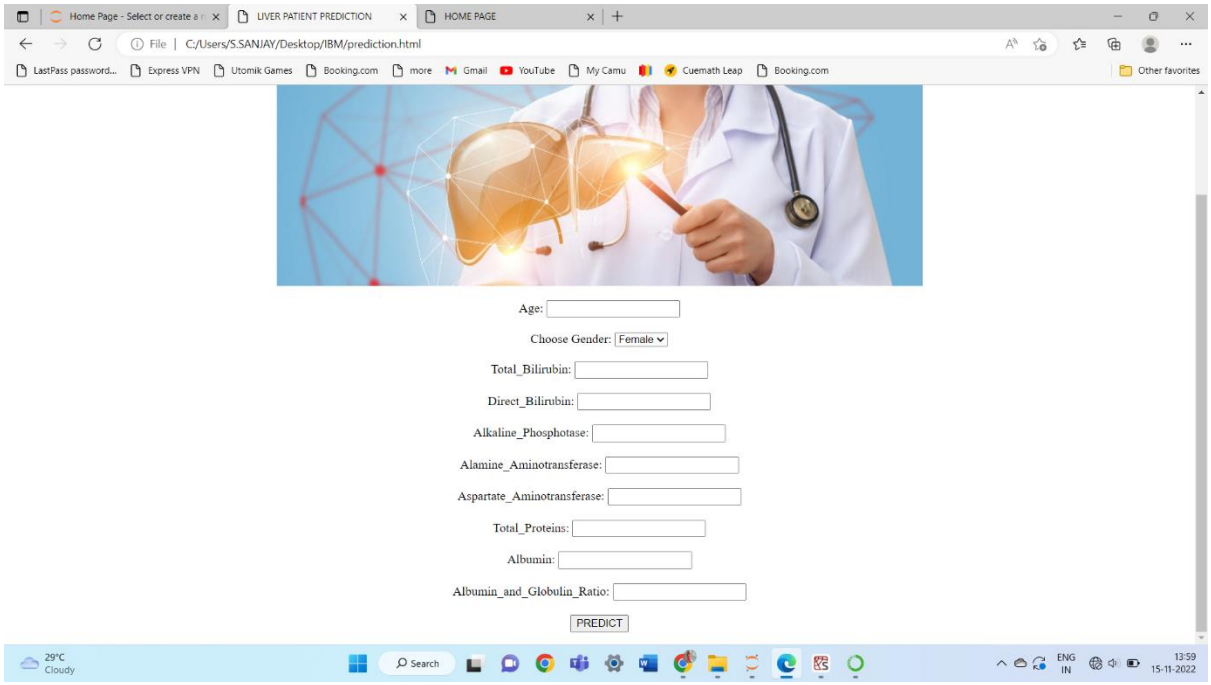
‹select id="Gender" name="Gender"›

‹option value="Female"›Female‹/option›

```
    <option value="Male">Male</option>
    <option value="Others">Others</option>
  </select><br><br>
<label> Total_Bilirubin: </label>
<input type="text" name="totalbilirubin" size="20"/> <br> <br>
<label> Direct_Bilirubin: </label>
<input type="text" name="directbilirubin" size="20"/> <br> <br>
<label> Alkaline_Phosphotase: </label>
<input type="text" name="alkalinephosphotase" size="20"/> <br> <br>
<label> Alamine_Aminotransferase: </label>
<input type="text" name="alamine" size="20"/> <br> <br>
<label> Aspartate_Aminotransferase: </label>
<input type="text" name="aspartate" size="20"/> <br> <br>
<label> Total_Proteins: </label>
<input type="text" name="totalproteins" size="20"/> <br> <br>
<label> Albumin: </label>
<input type="text" name="albumin" size="20"/> <br> <br>
<label> Albumin_and_Globulin_Ratio: </label>
<input type="text" name="albuminandglobulin" size="20"/> <br> <br>
<input type="button" value="PREDICT"/>
</form>
</body>
</center>
</html>
```

OUTPUT:


Home Page - Select or create a
LIVER PATIENT PREDICTION
HOME PAGE
File | C:/Users/S.SANJAY/Desktop/IBM/prediction.html
LastPass password...
Express VPN
Utomik Games
Booking.com
more
Gmail
YouTube
My Camu
Cuemath Leap
Booking.com
Other favorites
LIVER PATIENT PREDICTION
Age:
Choose Gender: Female
Total_Bilirubin:
Direct_Bilirubin:
Alkaline_Phosphotase:
Alamine_Aminotransferase:
Aspartate_Aminotransferase:
Total_Proteins:
29°C
Cloudy
Search
ENG
IN
13:59
15-11-2022


Home Page - Select or create a
LIVER PATIENT PREDICTION
HOME PAGE
File | C:/Users/S.SANJAY/Desktop/IBM/prediction.html
LastPass password...
Express VPN
Utomik Games
Booking.com
more
Gmail
YouTube
My Camu
Cuemath Leap
Booking.com
Other favorites
Age:
Choose Gender: Female
Total_Bilirubin:
Direct_Bilirubin:
Alkaline_Phosphotase:
Alamine_Aminotransferase:
Aspartate_Aminotransferase:
Total_Proteins:
Albumin:
Albumin_and_Globulin_Ratio:
PREDICT
29°C
Cloudy
Search
ENG
IN
13:59
15-11-2022