

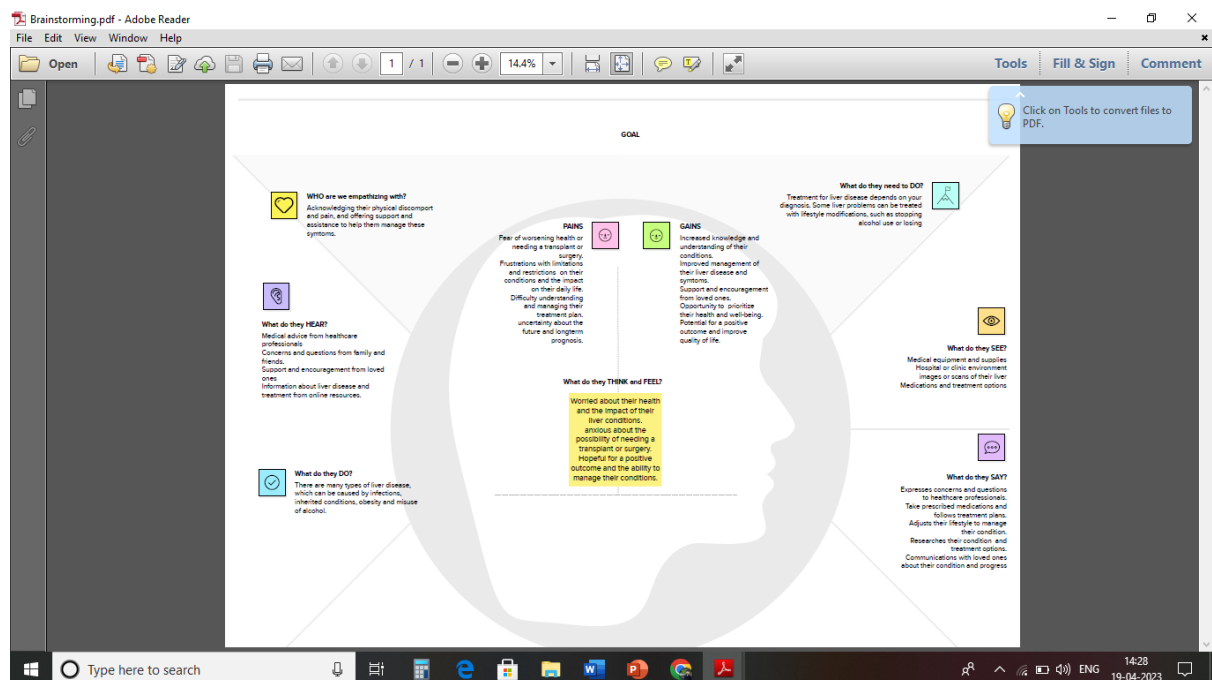
PROJECT REPORT TEMPLATE

INTRODUCTION

A group of blood tests called **liver function tests** can be used to diagnose liver disease. Other blood tests can be done to look for specific liver problems or genetic conditions. Imaging tests. An ultrasound, CT scan and MRI can show liver damage.

PROBLEM DEFINITION & DESIGN THINKING

EMPATHY MAP



BRAINSTORMING MAP

Empathy Map.pdf - Adobe Reader

File Edit View Window Help

Open 1 / 1 11.9%

Tools Fill & Sign Comment

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Convert PDF files to Word or Excel online.

Select PDF File:

Empathy Map.pdf 1 file / 21 KB

Convert To:

Microsoft Word (*.docx)

Recognize Text in English(U.S.)

Change

Convert

Create PDF

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Brainstorm

Write down any ideas that come to mind that address your problem statement.

10 minutes

Tip: You can select a sticky note and hit the pencil button to edit text or add drawings.

Aspirin

Aspirin guidance User

Aspirin users need to follow a specific diet to keep their liver healthy. As healthcare professionals, you can provide them with nutrition guidance and recommend the types of food they should eat or avoid.

Aspirin

Exercise recommendations

Proper exercise is essential for liver patients to maintain their overall health. You can provide them with recommendations for activities that can improve their liver function and reduce the risk of complications.

Aspirin

Medication management User

Patients often take medications to manage their symptoms or underlying conditions. You can help them by ensuring they understand how to take their medication, monitor their side effects, and avoid interactions with other medications.

Aspirin

Discomfort support (using anti-inflammatory drugs)

Discomfort can be a challenge for liver patients. You can provide them with information on how to manage their discomfort, including using anti-inflammatory drugs and other pain management techniques.

Group Ideas

Take turns sharing your ideas while clustering similar or related notes as you sticky notes have been grouped, give each cluster a center bubble label. If a bigger than six sticky notes, try and see if you can break it up into smaller sub-groups.

20 minutes

RESULT

Liver_Screenshot.png

50%

Liver Disease Prediction

Age

In Year

Gender

Male = 1, Female=0

Total Bilirubin

Total Bilirubin

Alkaline Phosphatase

Alkaline Phosphatase

Alamine Aminotransferase

Alamine Aminotransferase

Aspartate Aminotransferase

Aspartate Aminotransferase

Total Proteins

Total Proteins

Albumin

Albumin

Albumin and Globulin Ratio

Albumin and Globulin Ratio

Submit

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ADVANTAGES AND DISADVANTAGES

A liver biopsy is a test used to diagnose liver conditions. Tissue samples are removed from your liver and checked under a microscope for signs of damage or disease. A liver biopsy can tell if there are cancer cells or other abnormal cells in your liver. It can also tell how well your liver is working.

DISADVANTAGES

- Pain. Pain at the biopsy site is the most common complication after a liver biopsy. ...
- Bleeding. Bleeding can occur after a liver biopsy but is not a common complication. ...
- Infection. Rarely, bacteria may enter the abdominal cavity or bloodstream.
- Accidental injury to a nearby organ.

APPLICATIONS

A group of blood tests called liver function tests can be used to diagnose liver disease. Other blood tests can be done to look for specific liver problems or genetic conditions. Imaging tests. An ultrasound, CT scan and MRI can show liver damage.

CONCLUSION

Summary. The main roles of the liver include removing toxins, processing food nutrients and regulating body metabolism. Important causes of liver disorders are fatty liver, hepatitis virus infections and alcohol. Cirrhosis (liver scarring), the end-result of many liver disorders, can lead to liver failure.

FUTURE SCOPE



The liver has a unique capacity among organs to regenerate itself after damage. A liver can regrow to a normal size even after up to 90% of it has been removed. But the liver isn't invincible. Many diseases and exposures can harm it beyond the point of repair.

APPENDIX

The screenshot displays a Kaggle notebook interface. The browser tabs at the top include 'Untitled mural • Naan mudhalva', 'Introducing ChatGPT', 'ChatGPT | OpenAI', and 'Liver Patients Analysis, prediction & accuracy'. The notebook title is 'Liver Patients Analysis, prediction & accuracy'. The left sidebar shows navigation options: Home, Competitions, Datasets, Models, Code (selected), Discussions, Learn, and More. The main content area shows the first code cell with the following code:

```
In [1]: #Import all required libraries for reading data, analysing and visualizing data
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
%matplotlib inline
from sklearn.preprocessing import LabelEncoder
```

Below the code cell, the text 'Data Analysis' is visible. The right sidebar contains a 'Table of Contents' with links to 'Analysis and Prediction-Indian...', 'Data Analysis', 'Data Visualization', 'Observation:', and 'Machine Learning'. A cookie banner is visible at the bottom of the notebook interface.

The second screenshot shows the same notebook at a later stage. The second code cell is executed, showing the output of the data loading process:

```
In [2]: #Read the training & test data
liver_df = pd.read_csv('../input/indian_liver_patient.csv')
```

Below the code cell, a text description of the dataset is provided:

This data set contains 416 liver patient records and 167 non liver patient records collected from North East of Andhra Pradesh, India. The "Dataset" column is a class label used to divide groups into liver patient (liver disease) or not (no disease).

The third code cell is executed, showing the output of the data loading process:

```
In [3]: liver_df.head()
```

The output is a table showing the first two rows of the dataset:

	Age	Gender	Total_Bilirubin	Direct_Bilirubin	Alkaline_Phosphatase	Alamine_Aminotransferase
0	65	Female	0.7	0.1	187	16
1	62	Male	10.9	5.5	699	64

A cookie banner is also visible at the bottom of this screenshot.

Untitled mural • Naan mudhalver x Introducing ChatGPT x ChatGPT | OpenAI x k Liver Patients Analysis, prediction x +

kaggle.com/code/sanjames/liver-patients-analysis-prediction-accuracy

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Liver Patients Analysis, prediction & accuracy

Notebook Input Output Logs Comments (11)

into liver patient (liver disease) or not (no disease).

In [3]:

```
liver_df.head()
```

Out[3]:

	Age	Gender	Total_Bilirubin	Direct_Bilirubin	Alkaline_Phosphatase	Alamine_Aminotransferase
0	65	Female	0.7	0.1	187	16
1	62	Male	10.9	5.5	699	64
2	62	Male	7.3	4.1	490	60
3	58	Male	1.0	0.4	182	14
4	72	Male	3.9	2.0	195	27

In [4]:

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14:45 19-04-2023

PROJECT SUCCESSFULLY COMPLETED

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