Model Development Phase Template

Date	15 March 2024
Team ID	team-739866
Project Title	Revolutionizing Liver care : Predicting Liver cirrhosis using Advanced machine learning Techniques
Maximum Marks	5 Marks

Feature Selection Report Template

In the forthcoming update, each feature will be accompanied by a brief description. Users will indicate whether it's selected or not, providing reasoning for their decision. This process will streamline decision-making and enhance transparency in feature selection.

Feature	Description	Selected (Yes/No)	Reasoning
age	Patient's age in years	Yes	Age is a significant risk factor for liver cirrhosis, and older adults are more likely to develop the disease.
Gender	Patient's gender (male/female)	Yes	Gender affects liver cirrhosis risk, with males being more likely to develop the disease.
Place	Patient's geographic location	NO	While geographic location may affect access to healthcare, it is not a direct risk factor for liver cirrhosis.

Duration of alcohol consumption	Number of years the patient has been consuming alcohol	Yes	Prolonged alcohol consumption is a significant risk factor for liver cirrhosis.
Quantity of alcohol consumption	Amount of alcohol consumed per day	Yes	Amount of alcohol consumed per day
Type of alcohol consumed	Type of alcoholic beverage (e.g., beer, wine, spirits)	NO	Not as significant as overall consumption duration and quantity.
Hepatitis B/C infection	Presence/absence of Hepatitis B/C infection	Yes	Hepatitis B/C infection is a significant risk factor.
Diabetes Result	Presence/absence of diabetes	YES	Diabetes is a risk factor for liver cirrhosis.
Blood pressure	Patient's blood pressure in mmHg	NO	Not as directly relevant to liver cirrhosis as other features.
Obesity	Presence/absence of obesity	Yes	Presence/absence of obesity
Family history of cirrhosis/hereditary	Presence/absence of family history of cirrhosis or hereditary liver disease	Yes	Family history is a risk factor for liver cirrhosis.

TCH, TG, LDL, HDL	Lipid profile measurements	Yes	Abnormal lipid profiles are associated with liver cirrhosis.
Hemoglobin, PCV, RBC, MCV, MCH, MCHC	Red blood cell indices	Yes	Anemia and red blood cell abnormalities are associated with liver cirrhosis.
Total Count, Polymorphs, Lymphocytes, Monocytes, Eosinophils, Basophils	Complete Blood Count (CBC) parameters	Yes	Abnormal CBC parameters are associated with liver cirrhosis.
Platelet Count	Number of platelets in the blood	Yes	Low platelet count is associated with liver cirrhosis.
Total Bilirubin, Direct Bilirubin, Indirect Bilirubin	Liver function test (LFT) measurements	Yes	Elevated bilirubin levels are associated with liver cirrhosis.
Total Protein, Albumin,	LFT measurements	Yes	Abnormal protein levels and A/G ratio are associated with liver cirrhosis.

Globulin, A/G Ratio			
ALP, SGOT/AST, SGPT/ALT	LFT measurements	Yes	Elevated enzyme levels are associated with liver cirrhosis.
USG Abdomen	Ultrasound findings (diffuse liver disease or not)	Yes	Ultrasound findings can indicate liver cirrhosis.
Predicted Value	Predicted outcome	Yes	Prediction of disease