**Model Development Phase Template**

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| 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.

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| **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, Globulin, A/G Ratio | LFT measurements | Yes | Abnormal protein levels and A/G ratio are associated with liver cirrhosis. |
| 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 |