**Data Collection and Preprocessing Phase**

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| Date | 19th June 2025 |
| Team ID | LTVIP2025TMID44055 |
| Project Title | Revolutionizing Liver Care : Predicting Liver  Cirrhosis Using Advanced Machine Learning Techniques |
| Maximum Marks | 2 Marks |

**Data Collection Plan and Raw Data Sources Identification:**

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| **Section** | **Description** |
| Project Overview | The project aims to develop a predictive model using advanced machine learning techniques to detect the onset or progression of liver cirrhosis in patients. Liver cirrhosis is a serious condition characterized by the scarring of the liver tissue, often resulting from long-term liver damage. Early detection and intervention are crucial for better patient outcomes and to prevent complications. By analyzing various patient data such as medical history, lab results and lifestyle factors, the model will provide predictions regarding the likelihood of liver cirrhosis, helping healthcare professionals make informed decisions about patient care. |
| Data Collection Plan | Data will be collected from various sources, including medical records, lab results, imaging data, and patient lifestyle information.  Specifically, the raw data for this project has been sourced from Kaggle, where a dataset relevant to liver cirrhosis prediction is available. |
| Raw Data Sources  Identified | The primary raw data source identified for this project is a dataset from Kaggle, titled "Liver Cirrhosis Prediction." The dataset contains various patient records with relevant features necessary for |

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|  | building the predictive model. The dataset includes medical history, lab test results, and other related health information. The dataset is available in excel format and can be downloaded using the following link: [Kaggle Liver Cirrhosis Prediction Dataset.](https://www.kaggle.com/datasets/bhavanipriya222/liver-cirrhosis-prediction) |

**Raw Data Sources**

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| **Source Name** | **Description** | **Location /URL** | **Format** | **Size** | **Access Permissions** |
| Kaggle | **Demographics**: Age, gender, and location (rural/urban).  **Alcohol Consumption:** Duration, quantity, and type.  **Medical History:** Hepatitis B/C, diabetes, blood pressure, obesity, family history of cirrhosis.  **Biochemical Markers:** Various blood and liver function test results.  **Diagnostic Imaging:** Abdominal ultrasound results.  **Outcome:** Indicator of liver cirrhosis presence. | [https://w ww.kagg le.com/d atasets/b havanipri ya222/liv ercirrhosispredictio n](https://www.kaggle.com/datasets/bhavanipriya222/liver-cirrhosis-prediction) | EXCEL | 240KB | Public |