Project Initialization and Planning Phase

Date	10 July 2024
Team ID	739716
Project Name	Predicting Base line histological staging in HCV patients using Machine Learning
Maximum Marks	3 Marks

Define Problem Statements (Customer Problem Statement Template):

Certainly! Predicting the baseline histological stage in patients with Hepatitis C (HCV) using machine learning is a fascinating area of research. Let's break down the problem statement:

1. **Background:**
   - **Hepatitis C (HCV): HCV is a viral infection that primarily affects the liver. It can lead to chronic liver damage, cirrhosis, and even liver cancer if left untreated.**
   - **Histological Stage: Histological staging refers to assessing the severity of liver damage based on tissue samples (biopsies). It helps determine the extent of fibrosis (scarring) in the liver.**
   - **Baseline: The initial assessment when a patient is diagnosed with HCV.**

2.Problem Statement:

- **Objective: Develop a machine learning model that predicts the baseline histological stage in HCV patients based on relevant features.**
- **Input Features:**
  - **Clinical Data: Demographic information (age, gender, etc.), medical history, symptoms, and other relevant clinical factors.**
  - **Biomarkers: Blood-based markers (e.g., liver enzymes, viral load) that provide additional information about disease progression.**
- **Output: A predicted histological stage (e.g., mild fibrosis, moderate fibrosis, severe fibrosis, cirrhosis).**

Problem Statement (PS)	I am (Customer)	I'm trying to	But	Because	Which makes me feel
PS-1	I am a HCV patient	Know the stage of HCV	Hard to know the stage of HCV	By knowing the stage I can recover	Optimizing to know about HCV stage