Project Initialization and Planning Phase

Date	04 June 2024
Team ID	SWTID1720110187
Project Title	Revolutionizing Liver Care
Maximum Marks	3 Marks

Project Proposal (Proposed Solution) template

This project proposal outlines a solution to address a specific problem. With a clear objective, defined scope, and a concise problem statement, the proposed solution details the approach, key features, and resource requirements, including hardware, software, and personnel.

Project Overview	
Objective	The objective of the "Revolutionizing Liver Care: Predicting Liver Cirrhosis Using Advanced Machine Learning Techniques" project is to develop a predictive model that can accurately forecast the onset and progression of liver cirrhosis, enabling early detection, timely intervention, and improved patient outcomes.
Scope	The project will focus on analyzing various patient data, including medical history, lab results, imaging scans, and lifestyle factors, to create a comprehensive predictive model for liver cirrhosis. The model will be designed for integration into healthcare settings to assist healthcare providers in making informed decisions about patient care.
Problem Statement	
Description	The project aims to develop a predictive model using advanced machine learning techniques to detect the onset or progression of liver cirrhosis in patients. By analyzing various patient data, the model will provide predictions regarding the likelihood of liver cirrhosis, helping healthcare professionals make informed decisions about patient care. The model will be designed to be integrated into healthcare settings assist in patient screening, treatment planning, and resource allocation.
Impact	The successful implementation of the predictive model will have a significant impact on liver disease management. It will enable early detection of liver cirrhosis, allowing for timely intervention and

	improved patient outcomes. Healthcare providers will be able to make more informed decisions about patient care, leading to better resource allocation and reduced healthcare burdens. Patients with a family history of liver disease will feel more confident about their health and the diagnostic process, fostering a positive relationship with their healthcare providers.
Proposed Solution	
Approach	User interacts with the UI to enter the input. Entered input is analyzed by the model which is integrated. Once model analyses the input the prediction is showcased on the UI
Key Features	We are building a flask application which needs HTML pages stored in the templates folder and a python script app.py for scripting.

Resource Requirements

Resource Type	**Description**	**Specification/Allocation**
Hardware		
Computing Resources	CPU/GPU specifications, number of cores	2 x NVIDIA V100 GPUs
Memory	RAM specifications	8 GB
Storage	Disk space for data, models, and logs	1 TB SSD
Software		
Frameworks	Python frameworks	Flask
Libraries	Additional libraries	Scikit-learn, Pandas, Numpy
Development Environment	IDE, version control	Jupyter Notebook, Git
Data		
Data	Source, size, format	e.g., Kaggle dataset, 951, xlsx/csv