Project Initialization and Planning Phase

Date	03 August 2025
Project Title	Anemia Sense – Leveraging Machine Learning for Precise Anemia Recognitions
Maximum Marks	3 Marks

Project Proposal (Proposed Solution) Report

The proposal report aims to leverage machine learning for the precise recognition and management of anemia. The solution provides early detection, personalized treatment, and remote monitoring to improve patient outcomes, especially for rural and underserved populations.

Project Overview	
Objective	Develop a machine learning-based system for early detection, personalized treatment recommendations, and remote monitoring of anemia patients.
Scope	Includes data collection, exploratory analysis, model training using multiple algorithms, performance evaluation, and deployment as a web application for healthcare providers and patients.
Problem Statement	
Description	Patients with anemia often face late detection, ineffective generic treatments, and lack of continuous monitoring
Impact	Solving these challenges will enable early interventions, improve treatment effectiveness, reduce complications, and support remote healthcare.

Proposed Solution	
Approach	Solving these challenges will enable early interventions, improve treatment effectiveness, reduce complications, and support remote healthcare.
Key Features	-Early detection of anemia using ML-based predictive models. -Personalized treatment recommendations based on patient-specific factors. - Remote monitoring and follow-up using real-time data.

Resource Requirement		
Resource Type	**Description**	**Specification/Allocation**
Hardware		
Computing Resources	CPU/GPU specifications, number of cores	T4 GPU
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, matplotlib, seaborn
Development Environment	IDE	Jupyter Notebook, pycharm
Data		
Date	Source, size, format	Kaggle dataset