Project Initialization and Planning Phase

Date	20-06-2025
Team ID	SWDTID1749906902
Project Title	Early Stage Disease Diagnosis System Using Human Nail Image Processing
Maximum Marks	3 Marks

Project Proposal (Proposed Solution) report

This proposal outlines the development of an Early Stage Disease Diagnosis System Using Human Nail Image Processing. The project aims to leverage image processing and machine learning to enable early and accurate disease detection through analysis of human nail images.

Project Overview	
Objective	The primary objective is to revolutionize early disease detection by implementing advanced image processing and machine learning techniques for faster and more accurate assessments based on human nail images.
Scope	The project comprehensively assesses and enhances the disease diagnosis process, incorporating image processing and machine learning for a more robust and efficient system.
Problem Statement	
Description	Addressing inaccuracies and inefficiencies in current early disease diagnosis methods adversely affects timely medical intervention and patient outcomes.
Impact	Solving these issues will result in improved diagnostic efficiency, earlier detection of diseases, and an overall enhancement in healthcare delivery, contributing to better patient outcomes and organizational success.
Proposed Solution	
Approach	Employing image processing and machine learning techniques to analyze and predict disease indicators from human nail images, creating a dynamic and adaptable diagnostic system.
Key Features	- Implementation of an image processing and machine learning-based diagnostic model.

	- Real-time decision-making for quicker disease diagnosis. - Continuous learning to adapt to evolving disease patterns and diagnostic criteria.

Resource Requirements

Resource Type	Description	Specification/Allocation
Hardware		
Computing Resources	CPU/GPU specifications, number of cores	T4 GPU
Memory	RAM specifications	8 GB RAM
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, OpenCV (for image processing)
Development Environment	IDE	Google Colab, VS Code
Data		
Data	Source, size, format	Kaggle dataset (e.g., nail image datasets for disease detection), UCI dataset (e.g., medical image datasets), custom collected nail image data (size and format to be determined based on collection).