Project Initialization and Planning Phase

Date	08 August 2025
Skill Wallet ID	**SWUID20250188325**
Project Title	Predictive Pulse: Harnessing Machine Learning for Blood Pressure Analysis
Maximum Marks	3 Marks

Project Proposal (Proposed Solution) Report

The proposal report aims to transform hypertension stage detection using machine learning, enhancing accuracy and accessibility. It addresses the lack of quick, reliable tools for identifying high blood pressure risks, enabling early intervention and preventive care. Key features include a machine learning–based classification model, real-time stage prediction from systolic/diastolic readings, and downloadable medical-style reports for patients and healthcare providers.

Project Overview	
Objective	The primary objective is to revolutionize the hypertension stage prediction process by implementing advanced machine learning techniques, ensuring faster and more accurate assessments.
Scope	The project comprehensively assesses and enhances the hypertension stage prediction process, incorporating machine learning for a more robust and efficient system.
Problem Statement	
Description	Addressing inaccuracies and inefficiencies in the current hypertension stage prediction system adversely affects operational efficiency and customer satisfaction.
Impact	Solving these issues will result in improved operational efficiency, reduced risks, and an overall enhancement in the lending process, contributing to customer satisfaction and organizational success.
Proposed Solution	
Approach	Employing machine learning techniques to analyze and predict creditworthiness, creating a dynamic and adaptable hypertension stage prediction system.
Key Features	- Implementation of a machine learning-based credit assessment model.

	Real-time decision-making for quicker hypertension stage predictions. Continuous learning to adapt to evolving health landscapes.

Resource Requirements

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, reportlab, gunicorn
Development Environment	IDE	Jupyter Notebook, VS Code, PyCharm
Data		
Data	Source, size, format	Kaggle Dataset, (1825 records, 14 features) 166.46KB, CSV