

Project Initialization and Planning Phase

Date	09 July 2024
Team ID	739801
Project Title	Sepsis Survival Prediction using Minimal Clinical Records
Maximum Marks	3 Marks

Project Proposal (Proposed Solution) report

The proposal report aims to transform loan approval using machine learning, boosting efficiency and accuracy. It tackles system inefficiencies, promising better operations, reduced risks, and happier customers. Key features include a machine learning-based credit model and real-time decision-making.

Project Overview	
Objective	The primary objective is to predict sepsis survival using minimal clinical records with advanced machine learning techniques to ensure timely and accurate assessments.
Scope	The project involves the comprehensive assessment of clinical data to predict sepsis survival, incorporating machine learning for a robust and efficient prediction system.
Problem Statement	
Description	Addressing the challenge of predicting sepsis outcomes with minimal clinical data to improve operational efficiency in clinical settings and enhance patient care.
Impact	Solving this issue will lead to improved clinical decision-making, reduced mortality rates, and an overall enhancement in patient management and care quality.
Proposed Solution	
Approach	Implementing machine learning techniques to analyze and predict sepsis survival, creating a dynamic and adaptable prediction system.
Key Features	- Implementation of various machine learning models including KNN, GaussianNB, Decision Tree, Logistic Regression, and Random Forest.

	<ul style="list-style-type: none"> - Real-time prediction capabilities for quick clinical decision-making. - Continuous learning to adapt to evolving medical data and clinical practices.
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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
Development Environment	IDE	Jupyter Notebook, PyCharm
Data		
Data	Source, size, format	Kaggle dataset, 614, csv UCI dataset, 690, csv