Project Initialization and Planning Phase

Date	04-07-2024
Team ID	739733
Project Title	Fetal AI: Using Machine learning to predict and monitor fetal health
Maximum Marks	3 Marks

Project Proposal (Proposed Solution) report

The primary objective is to enhance fetal health monitoring and prediction using advanced machine learning techniques, ensuring early detection of potential issues and improving maternal and fetal outcomes.

Project Overview	
Objective	The primary objective is to revolutionize fetal health monitoring by leveraging advanced machine learning techniques for early detection and prediction of potential complications, ensuring better maternal and fetal outcomes.
Scope	The scope includes developing machine learning models for real-time fetal health monitoring and predictive analytics, ensuring early detection of complications and personalized care.

Problem Statement	
Description	Leveraging machine learning to enhance fetal health monitoring and prediction, ensuring early detection of complications and personalized maternal-fetal care.
Impact	Machine learning in fetal health monitoring can drastically improve early detection and intervention, leading to better maternal and fetal outcomes.

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

Proposed Solution	
Approach	The approach involves collecting and preprocessing comprehensive health data, developing predictive machine learning models, and integrating them into healthcare systems for real-time monitoring and intervention.
Key Features	**Real-Time Monitoring**: Continuous analysis of fetal and maternal health data. **Predictive Analytics**: Early detection of potential complications. **Personalized Care**: Tailored interventions based on individual health profiles.

Resource Requirements

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