Model Development Phase Template

Date	08-07-2024
Team ID	739733
Project Title	Fetal AI: Using Machine Learning To Predict And Monitor Fetal Health
Maximum Marks	6 Marks

Model Selection Report

In the forthcoming Model Selection Report, various models will be outlined, detailing their descriptions, hyperparameters, and performance metrics, including Accuracy or F1 Score. This comprehensive report will provide insights into the chosen models and their effectiveness.

Model	Description	Hyperparameters	Performance Metric (e.g., Accuracy, F1 Score)

Random Forest	Using machine learning to predict and monitor fetal health provides robust, real-time analysis of complex physiological data, reducing risks and improving prenatal care. Advanced algorithms identify patterns and anomalies, offering early interventions for fetal complications.	-	Accuracy score =93%
Decision Tree	Decision trees for predicting and monitoring fetal health offer interpretable models that map complex physiological data into clear decision rules. They facilitate early detection of potential issues, enhancing prenatal care through precise and actionable insights.	-	Accuracy score =90%

KNN	K-Nearest Neighbors (KNN) for predicting and monitoring fetal health leverages proximity-based analysis to identify similar physiological patterns. This non-parametric method excels in detecting subtle variations, enhancing the accuracy of fetal health assessments.	-	Accuracy score =84%
Logistic Regression	Logistic Regression for predicting and monitoring fetal health provides a probabilistic approach to identifying potential risks based on physiological data. This method offers clear and interpretable results, aiding in early detection and decision-making for fetal care.	-	Accuracy score =76%