Model Development Phase Template

Date	8 July 2024
Team ID	739876
Project Title	FetalAI: 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 Selection Report:

Model	Description	Hyperparameters	Performance Metric (e.g., Accuracy, F1 Score)
Random Forest	A random forest is a meta estimator that fits a number of decision tree classifiers on various sub-samples of the dataset and uses averaging to improve the predictive accuracy and control over-fitting.	-	Accuracy score=94%
Decision Tree	Decision tree has a hierarchical tree structure consisting of a root node, branches, internal nodes, and leaf nodes. Decision trees are used for classification and regression tasks, providing easy-to-understand models.	-	Accuracy score=92%

Logistic Regression	Logistic regression is a statistical method used for binary classification tasks. It models the probability that a given input belongs to a particular class by using the logistic function, which maps any real-valued number into a value between 0 and 1.	-	Accuracy score=86%
K-Nearest Neighbors	K-Nearest Neighbors (KNN) is a simple, non-parametric, and lazy learning algorithm used for classification and regression. It operates on the principle of feature similarity.	-	Accuracy score=91.5%