Model Development Phase Template

Date	18 June 2024
Team ID	739634
Project Title	Flight Delays Prediction Using Machine Learning
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)
Logistic Regression	Logistic regression is a statistical method for binary classification that models the probability of a binary outcome using a logistic function. It transforms linear combinations of input features into probabilities between 0 and 1. This method is simple, interpretable, and effective for linear relationships.	-	Accuracy Score=92%
Random Forest	Random Forest is an ensemble learning method that builds multiple decision trees using random subsets of data and features. It combines the predictions of these trees to improve accuracy and reduce	-	Accuracy Score=91%

	overfitting. This method is robust, handles large datasets well, and provides high predictive performance.		
Decision Tree	A decision tree is a flowchart-like model used for decision-making and classification, where nodes represent tests on features and branches represent outcomes. It recursively splits data into subsets, ending in leaf nodes that represent decisions or class labels.	-	Accuracy Score=86%