Model Development Phase Template

Date	16 july 2024
Team ID	739681
Project Title	Car Performance Prediction
Maximum Marks	6 Marks

Model Selection Report

The model selection report evaluates different machine learning algorithms for car performance prediction, comparing their accuracy, efficiency, and interpretability. The chosen model is selected based on performance metrics, computational requirements, and ability to generalize to unseen data.

Model Selection Report:

Model	Description	Hyperparameters	Performance Metric (e.g., R2 score)
Random forest classifier	Random forest is an ensemble learning method that constructs multiple decision trees and merges them to get a more accurate and stable prediction	Maximum depth	R2 Score:0.79
Decision tree classifier	It splits the data into subsets based on the value of input features, leading to a tree like model of decisions	max depth, min samples split	R2 Score:0.88
Extra tree classifier	Is an ensemble learning method that builds multiple decorrelated decision trees and merges their predictions	**max features, min samples split**	**R2 Score:0.89**