Model Development Phase Template

Date	15 July 2024
Team ID	SWTID1720090652
Project Title	Predictive Modelling for Fleet Fuel Management using Machine Learning Techniques
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	Random Forest is an ensemble learning method used for both regression and classification tasks. It operates by constructing a multitude of decision trees during training and outputting the average	N/A	Average RMSE: 0.6887571449768667 Standard Deviation of RMSE: 0.0919128258979233 Mean Absolute Error: 0.4446656898656903 Mean Squared Error: 0.3821795521791004 R^2 Score: 0.5436583449392025

	prediction (regression) or the mode of the classes (classification) of the individual trees.		
Support Vector Regression	Support Vector Regression (SVR) is a type of Support Vector Machine (SVM) that is used for regression tasks. It works by finding the hyperplane that best fits the data points within a certain margin of tolerance. SVR aims to minimize the error while maintaining the complexity of the model within a certain threshold.	N/A	Performance metric value
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