

Model Development Phase Template

Date	9 July 2024
Team ID	team-740110
Project Title	Precise Coffee Quality Prediction
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	Performance Metric (e.g., Accuracy, F1 Score)
Logistic Regression	Logistic Regression is a statistical model used to predict the probability of a binary outcome based on one or more predictor variables. It's particularly suited for problems where the dependent variable is categorical.	Accuracy score=69.2%
Decision Tree Classifier	A Decision Tree Classifier recursively partitions the data into subsets based on the most significant attributes at	Accuracy score=87.2%

	each node. It creates a tree-like model of decisions, making it interpretable and suitable for both classification and regression tasks.	
Random Forest Classifier	Random Forest Classifier is an ensemble learning method that builds multiple decision trees during training and merges them together to get a more accurate and stable prediction. It mitigates overfitting and improves accuracy compared to single decision trees.	Accuracy score=94.9%