

## Model Development Phase Template

Date	05 July 2024
Team ID	Team-740058
Project Title	Masterful Machines: Precise Coffee Quality Predictions Through ML
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	Description	Hyperparameters	Performance Metric (e.g., Accuracy, F1 Score)
Random Forest	Ensemble of decision trees; robust, handles complex relationships, reduces overfitting, and provides feature importance for predicting the precise coffee quality	-	Accuracy score = 95.2%
Decision Tree	Simple tree structure; interpretable, captures non-linear relationships, suitable for initial insights in predicting the precise coffee quality	-	Accuracy score = 100%
Logistic regression	Logistic regression is a statistical method used for binary classification tasks in machine learning and statistics. It predicts the probability of occurrence of	-	Accuracy score = 88.1%

	an event by fitting data to a logistic function for predicting the precise coffee quality		
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