

Model Development Phase Template

Date	05 July 2024
Team ID	Team-740058
Project Title	Masterful Machines: Precise Coffee Quality Predictions Through ML
Maximum Marks	5 Marks

Feature Selection Report Template

In the forthcoming update, each feature will be accompanied by a brief description. Users will indicate whether it's selected or not, providing reasoning for their decision. This process will streamline decision-making and enhance transparency in feature selection.

Feature	Description	Selected (Yes/No)	Reasoning
Aroma	The fragrance or smell of the coffee	Yes	Aroma is a primary factor influencing coffee quality perception. Machine learning can analyze aroma descriptors (e.g., floral, fruity, spicy) extracted from sensor data or expert evaluations.
Flavor	taste profile of the coffee	Yes	Flavor is complex and multidimensional, encompassing sweetness, bitterness, acidity, and various tasting notes (e.g., chocolate, citrus)
Aftertaste	The lingering flavor that remains after swallowing the coffee	Yes	The persistence and quality of aftertaste provide insights into the coffee's complexity and finish. Machine learning can analyze aftertaste characteristics, discerning how pleasant or lingering tastes contribute to overall quality assessments.

Acidity	Refers to the liveliness or brightness of the coffee,	Yes	Acidity is a critical attribute defining coffee's liveliness and perceived quality.
Body	The sensation of heaviness or thickness of the coffee in the mouthfeel	Yes	Body refers to the perceived thickness or viscosity of the coffee. Machine learning models can analyze sensor data or expert evaluations to quantify body attributes, correlating different body profiles with overall quality judgments.
Balance	The harmony and equilibrium of flavors, acidity, body, and other attributes	Yes	Balance reflects the harmony and integration of flavor, acidity, body, and other attributes
Uniformity	indicates a reliable and well-processed product.	Yes	Uniformity measures consistency across multiple samples of the same coffee.
Quakers	Defective beans that are underdeveloped and fail to roast properly	Yes	Quakers are defective beans that negatively impact flavor and consistency. Machine learning can identify quakers by analyzing visual data or sensor readings, helping to ensure that only high-quality beans are included in coffee batches.