Model Development Phase Template

Date	20 January 2026
Team ID	LTVIP2026TMIDS87753
Project Title	Electric Motor Temperature Prediction using Machine Learning
Maximum Marks	5 Marks

Feature Selection Report Template

The feature selection process was critical in honing in on the most relevant variables for predicting electric motor temperatures. By focusing on these features, we aim to enhance the predictive performance of our machine learning models while optimizing computational efficiency.

Feature	Description	Selected (Yes/No)	Reasoning
Current (Amperes):	Measures the electric current flowing through the motor, which can impact temperature.	Yes	These features provide valuable information to the machine learning model for identifying fraudulent activities. Here's a quick recap of each feature:

Voltage (Volts):	The voltage supplied to the motor; variations can affect performance and temperature.	**Yes**	The voltage supplied to the motor influences its efficiency and thermal performance. Variations in voltage can lead to changes in motor behavior and temperature.
Motor Load (% of Rated Load) •	The percentage of the motor's rated capacity being utilized. Higher loads can lead to increased temperatures.	**Yes**	Operating closer to the motor's rated load generally leads to higher temperatures. This feature helps understand how the load affects thermal conditions.