

Ideation Phase

Define the Problem Statements

Date	24 January 2026
Team ID	LTVIP2026TMIDS 47257
Project Name	Electric Motor Temperature Prediction using Machine Learning
Maximum Marks	2 Marks

Problem Statement Template:

Scenario 1: Preventive Maintenance

Manufacturing plants can use the temperature predictions to implement proactive maintenance strategies. By identifying potential overheating issues before they occur, maintenance teams can schedule timely inspections, replace worn-out components, and prevent costly downtime due to motor failures.

Scenario 2: Energy Efficiency

Facility managers can leverage temperature predictions to optimize energy consumption. By maintaining motors at optimal temperature levels, they can reduce energy wastage, improve equipment performance, and lower operational costs over time.

Scenario 3: Equipment Reliability

Industries relying heavily on electric motors, such as automotive production or HVAC systems, can benefit from accurate temperature predictions. Ensuring motors operate within safe temperature ranges enhances equipment reliability, prolongs lifespan, and minimizes the risk of unexpected breakdowns during critical operations.