Ideation Phase
Brainstorm & Idea Prioritization

Date	18 February 2026
Team ID	LTVIP2026TMIDS84143
Project Name	Electric Motor Temperature Prediction using Machine Learning
Maximum Marks	4 Marks

Brainstorm & Idea Prioritization:

Brainstorming Description

Brainstorming was conducted to explore innovative solutions related to electric motor performance and predictive maintenance. The team focused on identifying real-world industrial problems where machine learning could be applied effectively. All ideas were discussed openly without judgment to encourage creative thinking and technical feasibility analysis.

Several potential problem areas were identified in the domain of electric vehicles and industrial motors, including fault detection, energy optimization, predictive maintenance, vibration analysis, and temperature monitoring.

Ideas Generated

1. Electric Motor Fault Detection using Machine Learning
2. Predictive Maintenance System for Industrial Motors
3. Energy Efficiency Optimization in Electric Vehicles
4. Vibration-Based Motor Health Monitoring
5. Electric Motor Temperature Prediction using Sensor Data

Idea Evaluation Criteria

The ideas were evaluated based on:

- Real-world impact
- Technical feasibility
- Data availability
- Implementation complexity
- Innovation level
- Alignment with AI/ML concepts

Final Selected Idea

Electric Motor Temperature Prediction using Machine Learning

Reason for Selection

- Temperature monitoring is critical for motor safety and performance.
- Direct measurement of internal permanent magnet temperature is costly and complex.
- Sensor data is available and suitable for machine learning modelling.
- The project combines data preprocessing, regression modelling, and web deployment.
- The solution has practical applications in electric vehicles and industrial automation.

Prioritization Justification

Among all the brainstormed ideas, Electric Motor Temperature Prediction was prioritized because it provides:

- High industrial relevance
- Strong machine learning implementation scope
- Real-time monitoring potential
- Scalability for smart motor systems

This idea offers both technical depth and practical applicability, making it suitable for academic and industry-level implementation.