

## Planning Logic – Electric Motor Temperature Prediction System

**Date:** 19 February 2026

**Team ID:** LTVIP2026TMIDS61980

**Project Name:** Electric Motor Temperature Prediction System

**Maximum Marks:** 4 Marks

### Key Terms

- ❖ **Sprint:** A fixed development cycle during which selected project features are developed and tested. (Here, 4 sprints are planned.)
- ❖ **Epic:** A major functionality such as Data Processing, Model Training, Deployment, or Visualization, divided into smaller tasks.
- ❖ **Story:** A specific implementation task contributing to an Epic (e.g., Data Cleaning or Model Training).
- ❖ **Story Point:** A unit used to estimate effort or complexity using the Fibonacci scale (1, 2, 3, 5, 8...).

### Effort Classification:

- Very Easy → 1 Point
- Easy → 2 Points
- Moderate → 3–5 Points
- Difficult → 8+ Points

### Sprint Planning

#### Sprint 1: Project Setup & Data Preparation (5 Days)

**Epics Covered:** Dataset Handling, Environment Setup

- **USN-1:** Setup Python Environment & Install Libraries – **1 Point**
- **USN-2:** Load and Understand Dataset – **2 Points**
- **USN-3:** Data Cleaning & Null Value Handling – **3 Points**

**Total Story Points:** 6

## **Sprint 2: Data Preprocessing & Feature Engineering (5 Days)**

**Epics Covered:** Data Processing and Visualization

- **USN-4:** Perform Exploratory Data Analysis (EDA) – **3 Points**
- **USN-5:** Feature Scaling using MinMaxScaler – **3 Points**
- **USN-6:** Train-Test Data Splitting – **2 Points**
- **USN-7:** Data Visualization using Matplotlib & Seaborn – **2 Points**

**Total Story Points: 10**

## **Sprint 3: Model Development & Evaluation (4 Days)**

**Epics Covered:** Machine Learning Model Training

- **USN-8:** Train Linear Regression Model – **3 Points**
- **USN-9:** Train Decision Tree Regressor – **3 Points**
- **USN-10:** Train Random Forest & SVR Models – **3 Points**
- **USN-11:** Model Evaluation using RMSE &  $R^2$  Score – **3 Points**

**Total Story Points: 11**

## **Sprint 4: Deployment & Finalization (3 Days)**

**Epics Covered:** Deployment, Testing, Documentation

- **USN-12:** Save Model using Pickle – **1 Point**
- **USN-13:** Develop Flask Web Application – **3 Points**
- **USN-14:** Create User Interface (HTML & CSS) – **2 Points**
- **USN-15:** Testing, Validation & Documentation – **1 Point**

**Total Story Points: 7**

## **Team Velocity Calculation**

Total Story Points = 6 + 10 + 11 + 7 = **34**

Total Sprints = **4**

**Velocity =  $34 \div 4 = 8.5$  Story Points per Sprint (on average)**