Project Initialization and Planning Phase

Date	20 SEP 2024
Team ID	738337
Project Title	Electric Motor Temperature Prediction using Machine Learning
Maximum Marks	3 Marks

Project Proposal (Proposed Solution) template

This project aims to develop a machine learning model for predicting the temperature of electric motors based on various operational parameters

Project Overview	
Objective	The goal of this project is to leverage machine learning techniques to develop a predictive model that accurately forecasts the temperature of electric motors based on various operational parameters.
Scope	The scope of the "Electric Motor Temperature Prediction using Machine Learning" project encompasses various components that contribute to the development and deployment of a predictive model.
Problem Statement	
Description	The "Electric Motor Temperature Prediction using Machine Learning" project focuses on developing a predictive model to forecast the operating temperature of electric motors based on various operational parameters.
Impact	The implementation of a machine learning model for predicting electric motor temperatures is expected to yield significant benefits across various dimensions.
Proposed Solution	
Approach	The approach to developing a machine learning model for predicting electric motor temperatures involves a structured process that encompasses data collection

	Of preprocessing, model development, evaluation, and deployment. Here's a detailed breakdown of the approach:
Key Features	The development of a machine learning model for predicting electric motor temperatures involves several key features that enhance the model's effectiveness and usability.

Resource Requirements

Resource Type	Description	Specification/Allocation
Hardware		
Computing Resources	To effectively develop and deploy a machine learning model for predicting electric motor temperatures, various computing resources are required. These resources can be categorized into hardware, software, and cloud services.	NVIDIA GTX 1650 , 5 Processor
Memory	When developing and deploying a machine learning model for electric motor temperature prediction, memory (RAM) plays a crucial role in ensuring efficient data processing, model training, and real-time predictions. Here's a breakdown of memory requirements:	8 GB
Storage	Effective storage solutions are essential for managing the datasets, model artifacts, and logs associated with developing and deploying a machine learning model for electric motor temperature prediction. Here's a breakdown of the storage requirements:	1 TB SSD
Software		
Frameworks	Python frameworks	Flask

Libraries	Additional libraries	e.g., scikit-learn, pandas, numpy
Development Environment	version control	e.g., Jupyter Notebook, Git
Data		
Data	Source, size, format	e.g., Kaggle dataset, 10,000 images