**Electric motor temperature prediction**

The permanent magnet synchronous motor (PMSM) is a popular type of electric motor used in various applications, including electric vehicles, wind turbines, and industrial machines. It is Designed to provide synchronous speed operation from a supply of constant voltage. This type of starter motor has magnets that are directly embedded in the rotor iron so that when the current is applied to the windings, a magnetic field is created. The rotor then revolves within this field and starts turning at the same speed as the engine.

This project aims to develop a predictive model for predicting the permanent magnet temperature ('pm') of the motor. The dataset encompasses numerous measurements of the motor's performance, including voltages, currents, motor speed, and ambient temperature across various driving cycles.

There are 1.33 million records in this dataset.

Please create separate .py files for model training and prediction.

Make sure that your dataset during the model building and prediction phase goes through the same data processing and feature creation steps.

Your final deliverable can either be a python script which can be scheduled as a batch script to process temperature predictions in batch or a flask api endpoint which can be used to predict the permanent magnet temperature in real time.

Please submit the final report which give clear idea on below points

1. ML model selected.
2. Features selected.
3. Feature importance
4. Evaluation of model
5. Original code

Use the "Electric\_cars" table from the Database.db file for the project on predicting permanent magnet tooth temperature.

Please feel free to reach out to your mentor in case of any doubts.