Model Development Phase Template

Date	20 June 2024
Team ID	739809
Project Title	Predicting Permanent Magnet Resistance Of Electronic Motor Using Machine Learning
Maximum Marks	6 Marks

Model Selection Report :

In the forthcoming Model Selection Report, various models will be outlined, detailing their descriptions, hyperparameters, and performance metrics, including Accuracy or F1 Score.

Model	Description	Hyperparameters	Performance Metric (e.g., R2-Score)

Random Forest	Random Forest offers a robust and versatile approach for predicting permanent magnet resistance in electronic motors, leveraging ensemble learning principles to achieve accurate and reliable predictions. Adjustments in model parameters and careful feature selection are key to maximizing its effectiveness in this specific predictive modeling task	-	R2-score =99%
Decision Tree	The decision trees provide a transparent and effective method for predicting permanent magnet resistance in electronic motors. Their ability to handle non-linear relationships and interpretability make them suitable for understanding and optimizing motor performance based on various operational parameters.	-	R2-score =99%
Linear Regression	linear regression is a useful starting point for predicting permanent magnet resistance in electronic motors when the relationship between motor	-	R2-score =99%

	parameters and resistance can be reasonably approximated as linear. It offers transparency and insights into the factors influencing motor performance based on straightforward statistical principles.		