Model Development Phase

Date	13th July 2024
Team ID	SWTID1720098339
Project Title	Machine learning approach for predicting the price of natural gas
Maximum Marks	6 Marks

Model Selection Report:

Model	Description	Hyperparameters	Performance Metric (e.g., Accuracy, F1 Score)
Random Forest Regression	Random Forest Regression is an ensemble learning method that constructs multiple decision trees and merges them together to get a more accurate and stable prediction. It handles both regression and classification tasks and improves predictive performance by reducing overfitting.	n_estimators: 100 random_state: 42	Accuracy:91.23
Linear Regression Model	Linear Regression is a simple algorithm used to model the relationship between a dependent variable and one or more independent variables by fitting a linear equation. It is effective for understanding and predicting continuous data.	Nill	Accuracy:-89

Decision Tree Model	Decision Tree Regression splits the data into subsets based on feature values, forming a tree-like model. Each split is chosen to minimize the error, making it a straightforward and interpretable model for predicting continuous outcomes.	Max depth=10 random_state=42	Accuracy:96.21
Logistic Regression.	Logistic Regression is used for binary classification problems. It models the probability of a discrete outcome (e.g., high or low prices) by applying a logistic function to a linear combination of the input features	Random state=42	Accuracy:-88