

Model Development Phase Template

Date	10 July 2024
Team ID	SWTID1720096271
Project Title	Machine learning approach for Predicting the price of natural gas
Maximum Marks	4 Marks


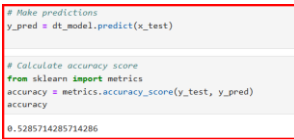

Initial Model Training Code, Model Validation and Evaluation Report

The initial model training code will be showcased in the future through a screenshot. The model validation and evaluation report will include classification reports, accuracy, and confusion matrices for multiple models, presented through respective screenshots.

Initial Model Training Code:

Paste the screenshot of the model training code

Model Validation and Evaluation Report:

Model	Classification Report	Accuracy	Confusion Matrix
Descision Tree Classifier			

Random Forest Classifier	<pre> from sklearn.metrics import confusion_matrix, accuracy_score y_pred_rf = model.predict(X_test) conf_matrix_rf = confusion_matrix(y_test, y_pred_rf) accuracy_rf = accuracy_score(y_test, y_pred_rf) 0.918473349579861 </pre>	<pre> conf_matrix_rf = metrics.confusion_matrix(y_test, y_pred_rf) conf_matrix_rf array([[397, 249], [320, 224]], dtype=int64) </pre>
SVM	<pre> from sklearn.metrics import confusion_matrix, accuracy_score y_pred_svc = model.predict(X_test) conf_matrix_svc = confusion_matrix(y_test, y_pred_svc) accuracy_svc = accuracy_score(y_test, y_pred_svc) 0.889915964385546 </pre>	<pre> conf_matrix_svc = metrics.confusion_matrix(y_test, y_pred_svc) conf_matrix_svc array([[357, 289], [318, 226]], dtype=int64) </pre>