EXTRA TREES REGRESSION

The code above trains an **Extra Trees Regression** model to predict the length of products using the `PRODUCT_TYPE_ID` feature.

- The required libraries are imported: `pandas` for data manipulation, `ExtraTreesRegressor` from `sklearn.ensemble` for building the Extra Trees model, and `mean_absolute_percentage_error` from `sklearn.metrics` for evaluating the model.

- The training and testing data are loaded from CSV files using `pandas`' `read_csv` function.

- The training and testing data are concatenated into a single data frame called `full_df`.Any missing data (NaN) in `full_df` is replaced with zeros using `fillna`.

- The `PRODUCT_TYPE_ID` feature is selected as the predictor feature (`X_train` and `X_test`), and `PRODUCT_LENGTH` is selected as the target feature (`y_train` and `y_test`).

- An Extra Trees Regression model is instantiated using `ExtraTreesRegressor()`.The Extra Trees model is trained on the training data (`X_train` and `y_train`) using `fit`.

- The Extra Trees model is used to make predictions on the testing data (`X_test`) using `predict`.

- The mean absolute percentage error (MAPE) between the actual target values (`y_test`) and the predicted target values (`y_pred`) is calculated using `mean_absolute_percentage_error`.The MAPE score is printed to the console.

- A submission file is created by constructing a data frame with the predicted target values (`y_pred`) and the corresponding `PRODUCT_ID` values from the testing data, and then writing this data frame to a CSV file using `to_csv`.