

CSA1618 DWDM-DE

EXPERIMENT-30

DESCRIPTION NUMERICAL PREDICTION ANALYSIS USING LINEAR REGRESSION THROUGH WEKA

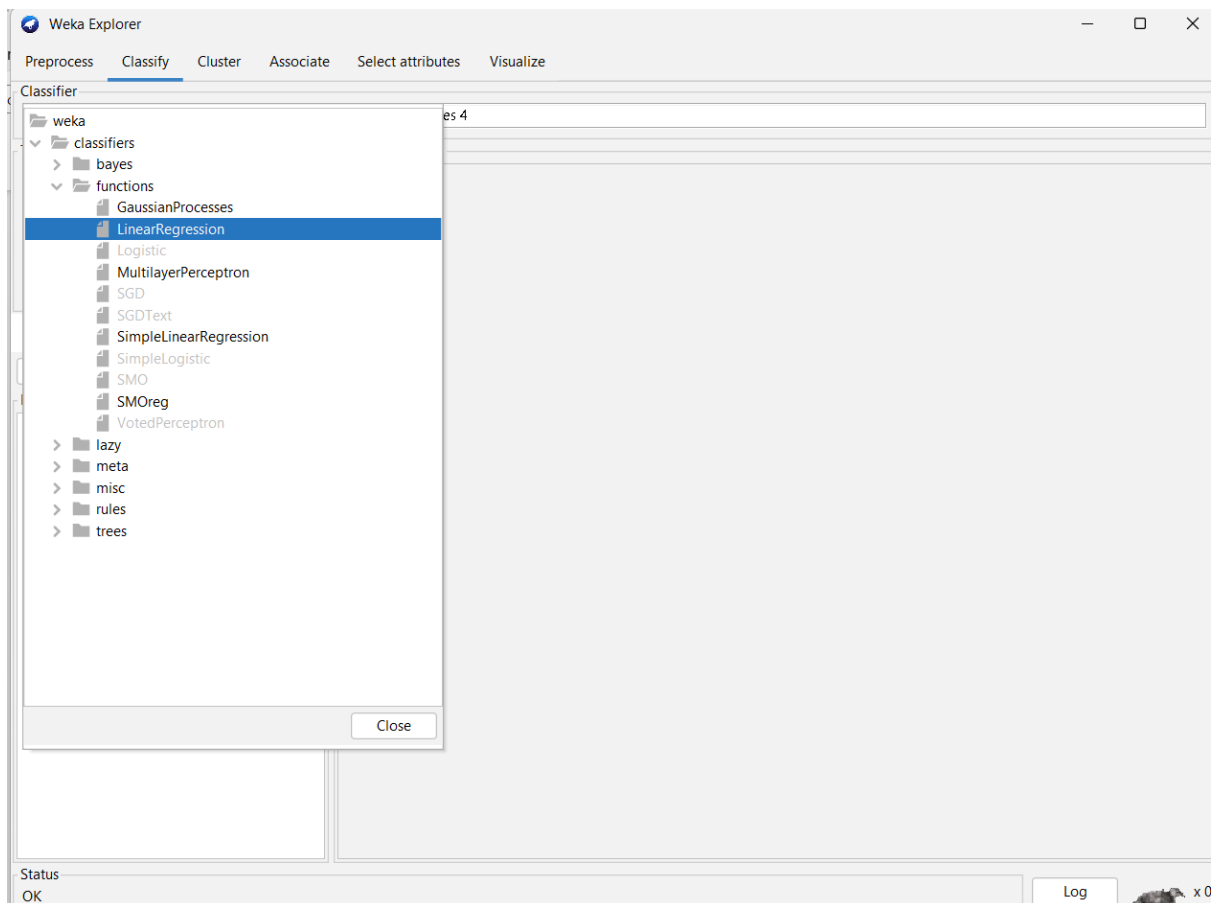
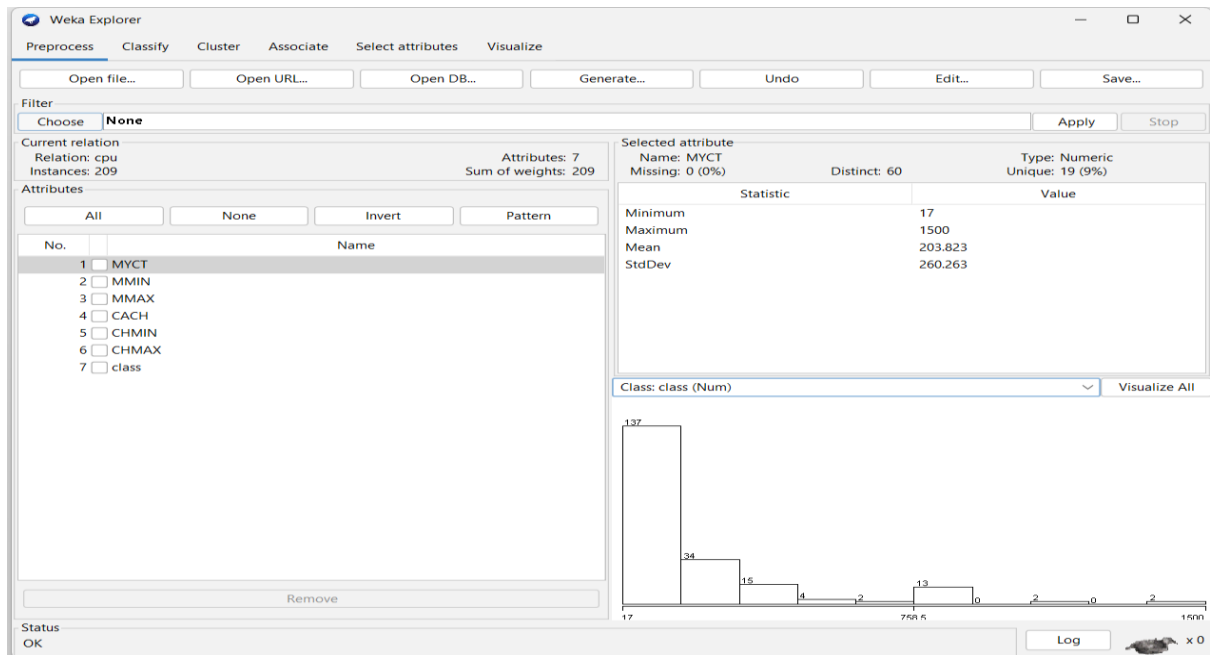
AIM:

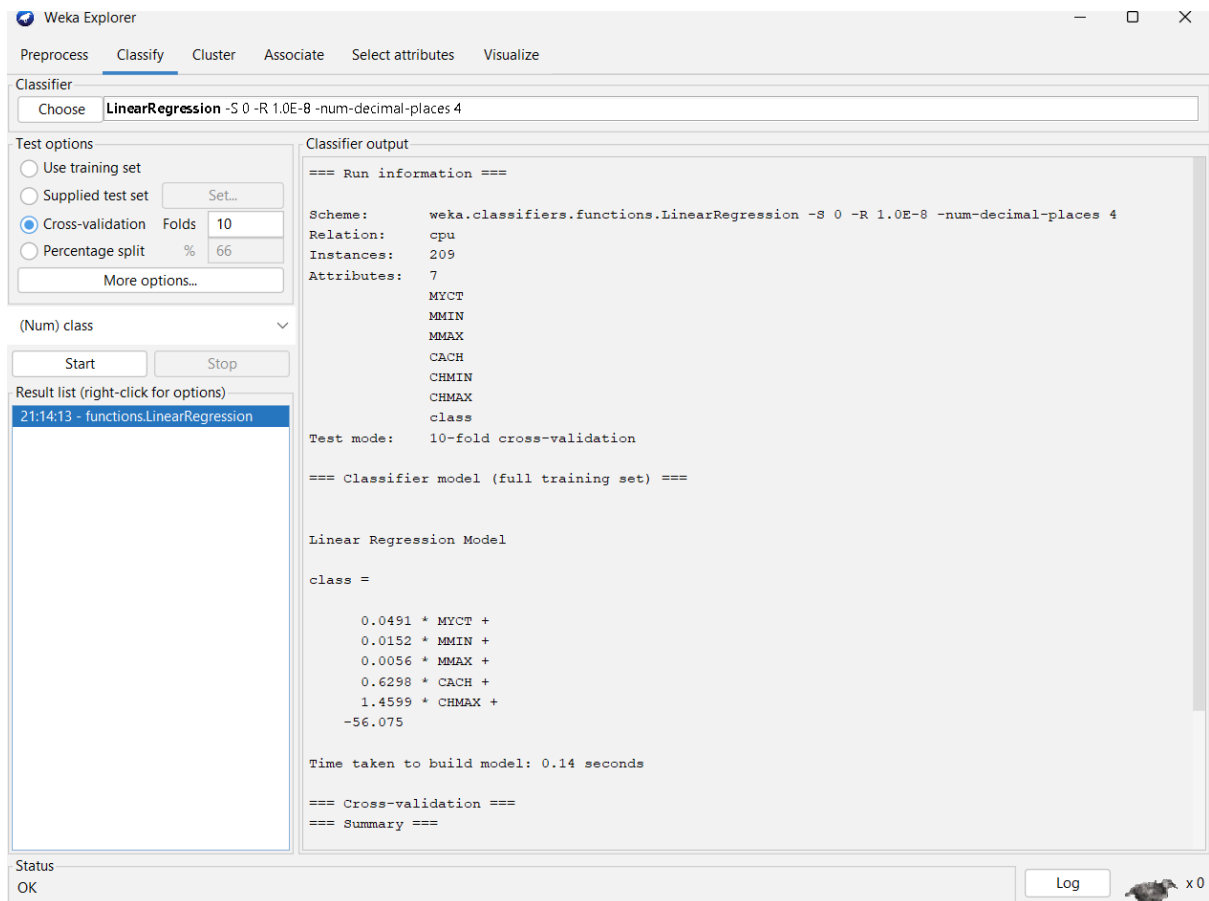
To create description numerical prediction analysis using linear regression through weka tool.

PROCEDURE:

1. Download and install WEKA.
2. Open WEKA and Choose "Explorer" from the main menu.
3. Under Preprocess, Click on the open file button and select the dataset. Ensure the target variable is numerical (continuous values like price, sales, etc.).
4. Go to the Classify tab.
5. Click and Choose Linear Regression.
6. Under Test options, choose: Cross-validation (10 Folds).
7. Click Start to begin classification.







OBSERVATION:

Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

Linear Regression Model

class =

$$\begin{aligned}
 &0.0491 * MYCT + \\
 &0.0152 * MMIN + \\
 &0.0056 * MMAX + \\
 &0.6298 * CACH + \\
 &1.4599 * CHMAX + \\
 &-56.075
 \end{aligned}$$

Time taken to build model: 0.14 seconds

=== Cross-validation ===

=== Summary ===

Correlation coefficient	0.9012
Mean absolute error	41.0886
Root mean squared error	69.556
Relative absolute error	42.6943 %
Root relative squared error	43.2421 %
Total Number of Instances	209

RESULT:

Thus, dataset has been observed using linear regression model. If the value of cross validation folds decreases time for creating model will be less than when folds value high, and the mean absolute error and Root mean square error values decreases with increase in the cross validation folds value.