

Name: Aditya Amit Umre

Sap id : 500119499

## AIML LAB EXPERIMENT 01

The screenshot shows the Weka Explorer interface with the 'Classify' tab selected. The classifier chosen is 'LinearRegression' with parameters '-S 0 -R 1.0E-8 -num-decimal-places 4'. The test options are set to 'Supplied test set' with 'Folds' set to 10. The classifier output is displayed, showing the run information and the model equation. The model equation is a linear regression model with 29 instances and 10 attributes. The output shows the model equation and the test mode.

```
=== Run information ===

Scheme:      weka.classifiers.misc.InputMappedClassifier -I -trim -W weka.classifiers.functions.LinearRegression -- -S 0 -R 1.0E-8 -num-decimal-places 4
Relation:    annual-enterprise-survey-2023-financial-year-provisional-weka.filters.AllFilter
Instances:   29
Attributes:  10
ear
Industry_aggregation_NZSIOC
Industry_code_NZSIOC
Industry_name_NZSIOC
Units
Variable_code
Variable_name
Variable_category
Value
Industry_code_ANZSIC06

Test mode:   user supplied test set:  size unknown (reading incrementally)

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

InputMappedClassifier:

Linear Regression Model

Value =

-13133.3559 * Units=Dollars (millions) +
14466.9784 * Variable_code=H09,H21,H05,H22,H23,H12,H34,H19,H26,H33,H04,H08,H25,H01,H31,H32,H29,H30,H24 +
21007 * Variable_code=H23,H12,H34,H19,H26,H33,H04,H08,H25,H01,H31,H32,H29,H30,H24 +
21106.4905 * Variable_code=H12,H34,H19,H26,H33,H04,H08,H25,H01,H31,H32,H29,H30,H24 +
145335.1769 * Variable_code=H34,H19,H26,H33,H04,H08,H25,H01,H31,H32,H29,H30,H24 +
64322.7675 * Variable_code=H19,H26,H33,H04,H08,H25,H01,H31,H32,H29,H30,H24 +
42092.8713 * Variable_code=H26,H33,H04,H08,H25,H01,H31,H32,H29,H30,H24 +
58950.4924 * Variable_code=H33,H04,H08,H25,H01,H31,H32,H29,H30,H24 +
29654.4197 * Variable_code=H04,H08,H25,H01,H31,H32,H29,H30,H24 +
50232.811 * Variable_code=H01,H31,H32,H29,H30,H24 +
57563.9509 * Variable_code=H32,H29,H30,H24 +
107027.943 * Variable_code=H29,H30,H24 +
771572.1498 * Variable_code=H30,H24 +
29323.6669 * Variable_name=Redundancy and severance,Salaries and wages to self employed commission agents,Indirect taxes,Non-operating expenses,Non-operating income,Depreciation,Surplus per employee count,Interest and donations,Opening stocks,Interest, dividends and donations,Closing stocks,Surplus before income tax,Salaries and wages paid,Total income per employee count,Purchases and other operating expenses,Fixed tangible assets,Other liabilities,Sales, government funding, grants and subsidies,Total expenditure,Current assets,Total income,Shareholders funds or owners equity,Current liabilities,Other assets,Total equity and liabilities,Total assets +
23221.9999 * Variable_name=Non-operating expenses,Non-operating income,Depreciation,Surplus per employee count,Interest and donations,Opening stocks,Interest, dividends and donations,Closing stocks,Surplus before income tax,Salaries and wages paid,Total income per employee count,Purchases and other operating expenses,Fixed tangible assets,Other liabilities,Sales, government funding, grants and subsidies,Total expenditure,Current assets,Total income,Shareholders funds or owners equity,Current liabilities,Other assets,Total equity and liabilities,Total assets +
14466.6884 * Variable_name=Interest and donations,Opening stocks,Interest, dividends and donations,Closing stocks,Surplus before income tax,Salaries and wages paid,Total income per employee count,Purchases and other operating expenses,Fixed tangible assets,Other liabilities,Sales, government funding, grants and subsidies,Total expenditure,Current assets,Total income,Shareholders funds or owners equity,Current liabilities,Other assets,Total equity and liabilities,Total assets +
29176 * Variable_name=Opening stocks,Interest, dividends and donations,Closing stocks,Surplus before income tax,Salaries and wages paid,Total income per employee count,Purchases and other operating expenses,Fixed tangible assets,Other liabilities,Sales, government funding, grants and subsidies,Total expenditure,Current assets,Total income,Shareholders funds or owners equity,Current liabilities,Other assets,Total equity and liabilities,Total assets +
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42092.843 * Variable_name=Fixed tangible assets,Other liabilities,Sales, government funding, grants and subsidies,Total expenditure,Current assets,Total income,Shareholders funds or owners equity,Current liabilities,Other assets,Total equity and liabilities,Total assets +
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57563.9062 * Variable_name=Current liabilities,Other assets,Total equity and liabilities,Total assets +
107028.0574 * Variable_name=Other assets,Total equity and liabilities,Total assets +
771572.3495 * Variable_name=Total equity and liabilities,Total assets +
-13133.311 * Variable_category=Financial performance,Financial position +
30725.2858 * Variable_category=Financial position +
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```

Weka Explorer

Preprocess   **Classify**   Cluster   Associate   Select attributes   Visualize

Classifier

Choose **LinearRegression** -S 0 -R 1.0E-8 -num-decimal-places 4

Test options

☐ Use training set

☒ Supplied test set   Set...

☐ Cross-validation   Folds   10

☐ Percentage split   %   70

More options...

(Num) Value   ▾

Start   Stop

Result list (right-click for options)

11:19:05 - misc.InputMappedClassifier

Classifier output

Model attributes	Incoming attributes
(numeric) ear	--> 1 (numeric) ear
(nominal) Industry_aggregation_NZSIOC	--> 2 (nominal) Industry_aggregation_NZSIOC
(numeric) Industry_code_NZSIOC	--> 3 (numeric) Industry_code_NZSIOC
(nominal) Industry_name_NZSIOC	--> 4 (nominal) Industry_name_NZSIOC
(nominal) Units	--> 5 (nominal) Units
(nominal) Variable_code	--> 6 (nominal) Variable_code
(nominal) Variable_name	--> 7 (nominal) Variable_name
(nominal) Variable_category	--> 8 (nominal) Variable_category
(numeric) Value	--> 9 (numeric) Value
(nominal) Industry_code_ANZSIC06	--> 10 (nominal) Industry_code_ANZSIC06

Time taken to build model: 0.14 seconds

=== Evaluation on test set ===

Time taken to test model on supplied test set: 0.1 seconds

=== Summary ===

Correlation coefficient	1
Mean absolute error	1482.2677
Root mean squared error	2411.7589
Relative absolute error	0.2685 %
Root relative squared error	0.3246 %
Total Number of Instances	29