

R FOR DATA SCIENCE

Statistics & Machine Learning

CHURN MODEL WITH DEEP LEARNING

- Task: Identify customers who are likely to defect
- Model: Neural Network (Deep Learning)

The screenshot displays the RStudio interface with the following components:

- Source Editor:** Contains R code for fitting a deep learning model using the `h2o` package. The code includes installing `h2o`, initializing it, training a model with 5 hidden units, 100 epochs, and predicting on a test set. It also calculates accuracy and generates a confusion matrix using the `caret` package.
- Environment Panel:** Shows the objects created in the global environment:
 - `dataset`: 10000 obs. of 11 variables
 - `test_set`: 2000 obs. of 11 variables
 - `training_set`: 8000 obs. of 11 variables
 - `accuracy`: 0.861
 - `cm`: 'table' int [1:2, 1:2] 1527 212 66 195
 - `model`: Formal class H2ORegressionModel
 - `split`: logi [1:10000] TRUE FALSE TRUE FALSE TRUE...
 - `y_pred`: int [1:2000] 0 0 1 0 0 0 1 0 0 0 ...
- Console:** Displays the output of the `confusionMatrix` function, showing various performance metrics:
 - Pos Pred Value : 0.8781
 - Neg Pred Value : 0.7471
 - Prevalence : 0.7965
 - Detection Rate : 0.7635
 - Detection Prevalence : 0.8695
 - Balanced Accuracy : 0.7188
 - 'Positive' Class : 0