

DAT 640 Practical R Activity Six Guidelines and Rubric: Association Analysis

Association analysis is used to identify relationships among variables; in other words, it connects attributes that often occur together. The approach is often used in mining large, transaction-based data sets to find products that are often bought together while shopping. Such analyses can be used to recommend products to shoppers or to redesign websites for easier navigation.

This assignment requires you to load a data file (dvdtrans.csv) into RStudio. To do this use the following instructions:

- a) To load the DVD data, you will first need to load Rattle in RStudio:
 - i) `install.packages("rattle")`
 - ii) `library(rattle)`
- b) When the install has completed (only takes less than a minute), you will need to locate the dvdtrans.csv file from the rattle folder.
 - i) Location can vary depending on your machine, an example would be: `C:\Program Files\R\R-3.5.1\library\rattle\csv`
- c) To load this file use the Import Dataset from RStudio by following these instructions:
 - i) Click File
 - ii) Import Dataset
 - iii) From Text (readr)...
 - iv) Navigate to the dvdtrans.csv file from b) above.

Your analysis should include the following **critical elements**:

- 1) Build an association model using R. Load the DVD data into R and use the `apriori()` procedure to convert the data into a transaction data structure.
- 2) Use the inspect procedure to extract and order the rules by confidence.
- 3) Provide an interpretation of the resulting output. In your interpretation, discuss the relationship and application of support, confidence, and lift in determining the strength of the predictive model.

Chapter 16 of [Data Mining and Business Analytics With R](#), by Johannes Ledolter, may be useful in interpreting your results. You can access the e-book for free through the Shapiro Library.

Guidelines for Submission: Your submission should follow these formatting guidelines: double spacing, 12-point Times New Roman font, one-inch margins, and citations, if any, in APA format when appropriate.

Critical Elements	Exemplary (100%)	Proficient (90%)	Needs Improvement (70%)	Not Evident (0%)	Value
Demonstration of R Command Execution	Includes demonstration of all R command executions in the form of screenshots or command output listings	Includes demonstration of most of R command executions in the form of screenshots or command output listings	Includes limited demonstration of R command executions in the form of screenshots or command output listings	Does not include demonstration of R command executions in the form of screenshots or command output listings	15
Required Elements	Meets “Proficient” criteria and provides additional analyses or relevant supporting scholarly material	Submission includes all the required elements of the analysis	Submission includes more than 50% of the required elements of the analysis	Submission includes less than 50% of the required elements of the analysis	15
Model Computation	Meets “Proficient” criteria and includes assessment of alternative settings/tuning procedures	Demonstrates accurate utilization of the R/Rattle packages per the model specifications	Demonstrates utilization of the R/Rattle packages with inaccuracies or does not adhere to the model specifications	Does not demonstrate utilization of the R/Rattle packages	30
Model Analysis	Meets “Proficient” criteria and draws insightful conclusions that are thoroughly defended with evidence and examples	Provides in-depth analysis that demonstrates complete understanding of concepts and draws informed conclusions that are justified with evidence	Provides an analysis that demonstrates a general understanding of concepts or draws logical conclusions, but does not defend with evidence	Does not provide in-depth analysis	30
Articulation of Response	Submission is free of errors related to citations, grammar, spelling, syntax, and organization and is presented in a professional and easy-to-read format	Submission has no major errors related to citations, grammar, spelling, syntax, or organization	Submission has major errors related to citations, grammar, spelling, syntax, or organization that negatively impact readability and articulation of main ideas	Submission has critical errors related to citations, grammar, spelling, syntax, or organization that prevent understanding of ideas	10
Earned Total					100%