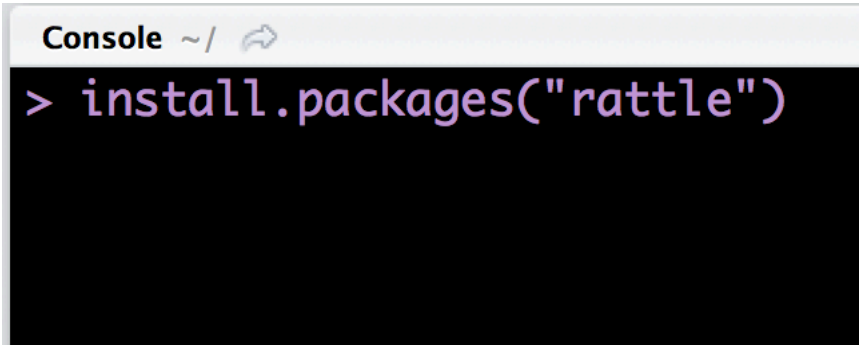
Rattle

A Data Mining GUI for R

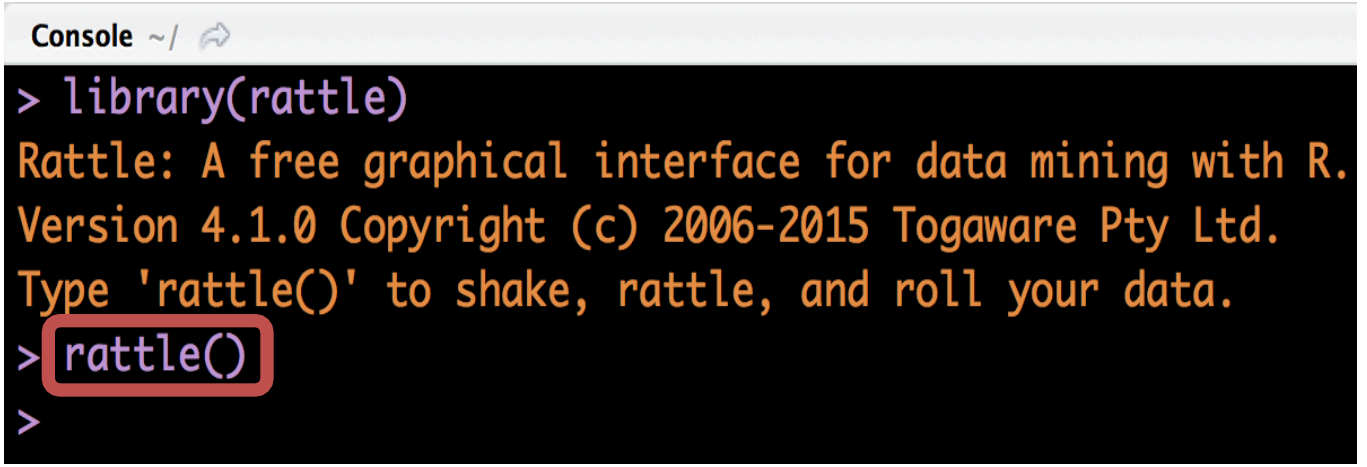
Kristen Chan

安裝、載入 Rattle

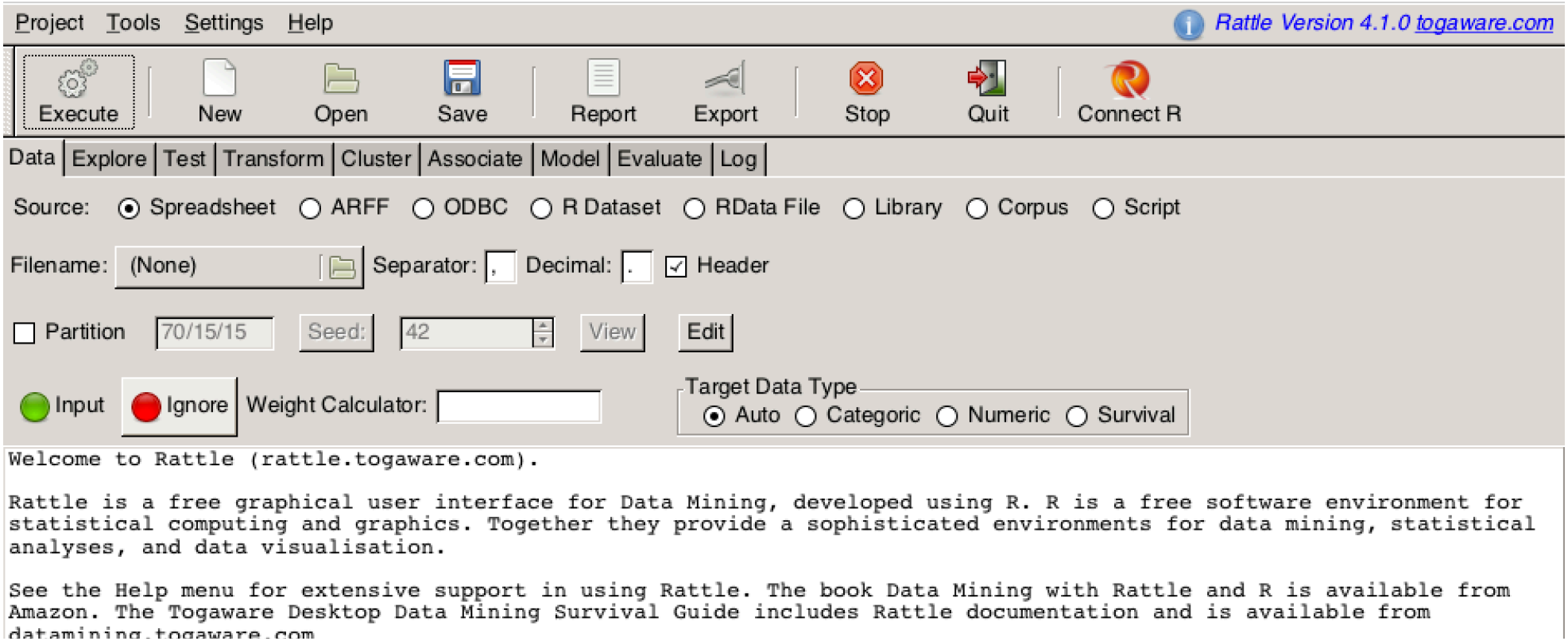
安 裝



載 入



Rattle



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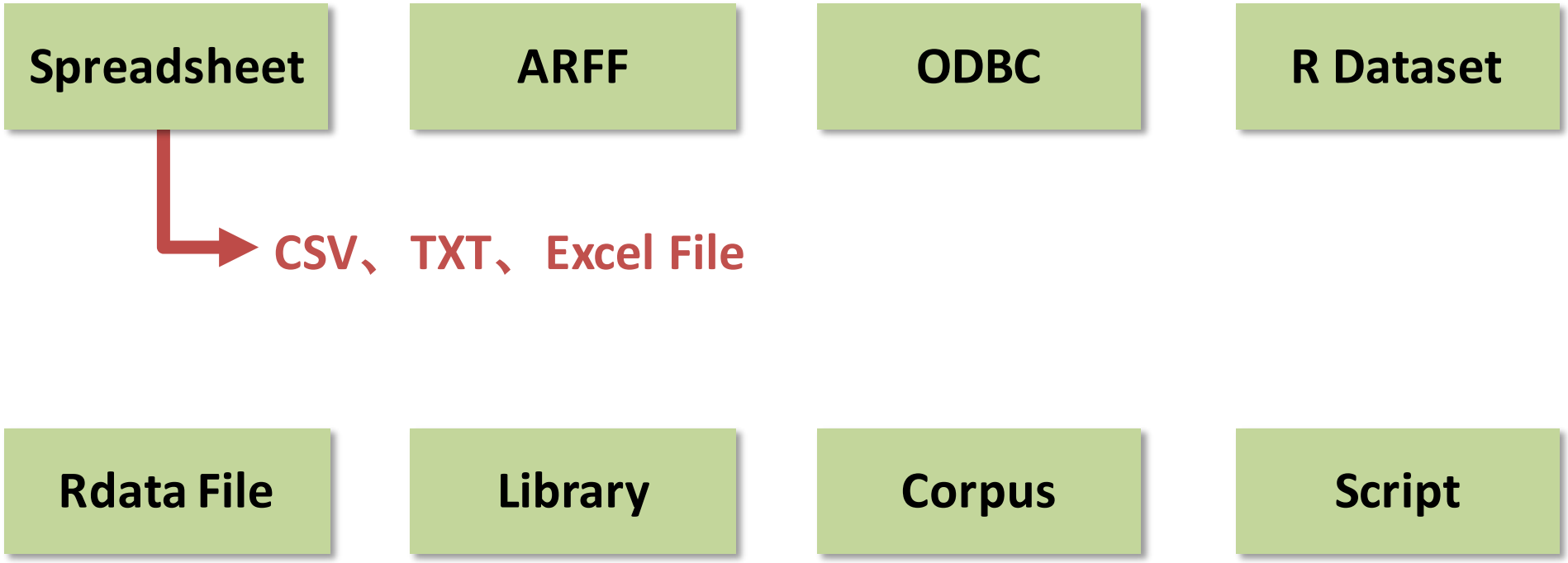
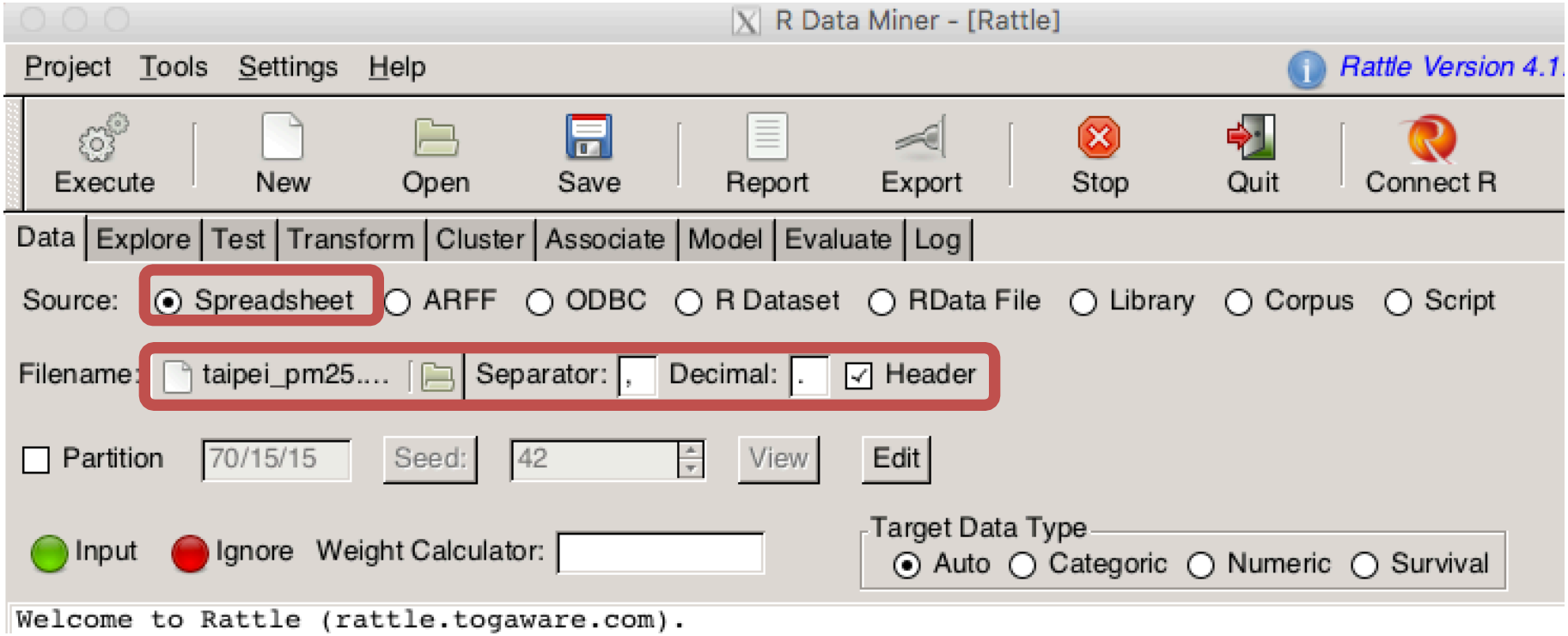
Import Data 載入數據



Import Data – Spreadsheet



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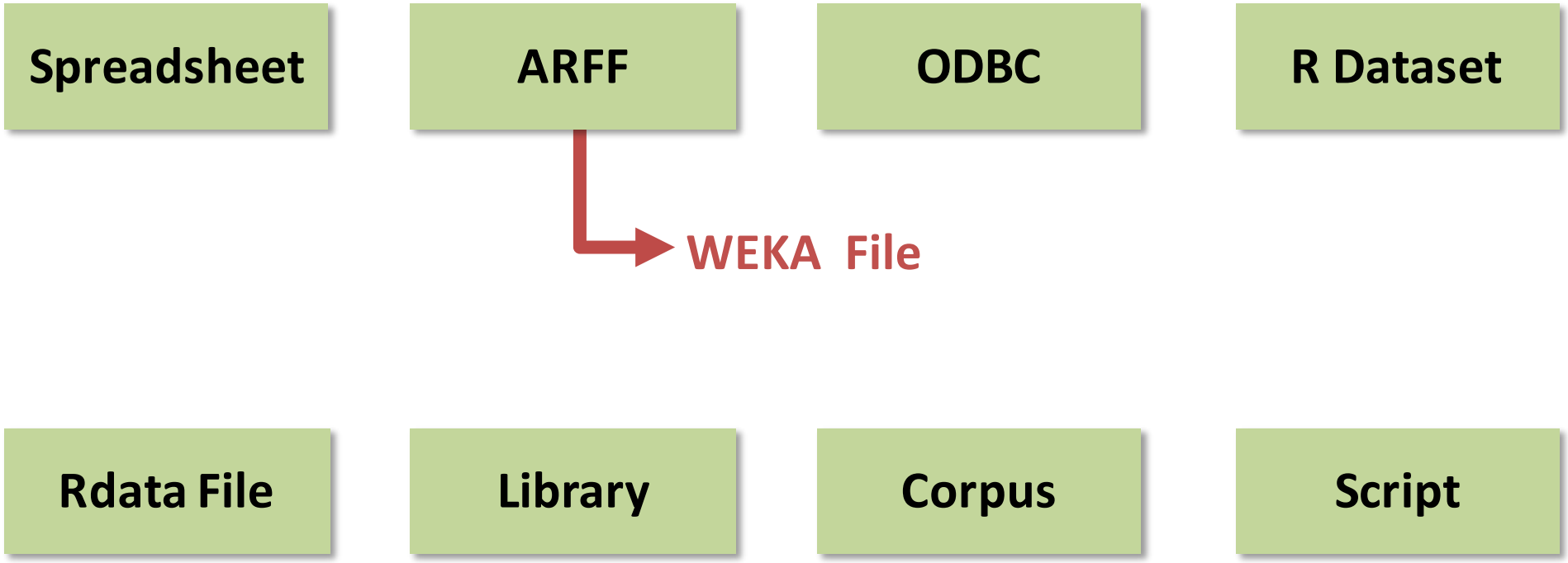
Import Data 載入數據



Weka

Weka (Waikato Environment for Knowledge Analysis)

提供 data mining 以及 machine learning 各種工具的一套軟體
包括資料前置處理工具、分類工具、回歸分析等，也能將資料以視覺畫的方式呈現。

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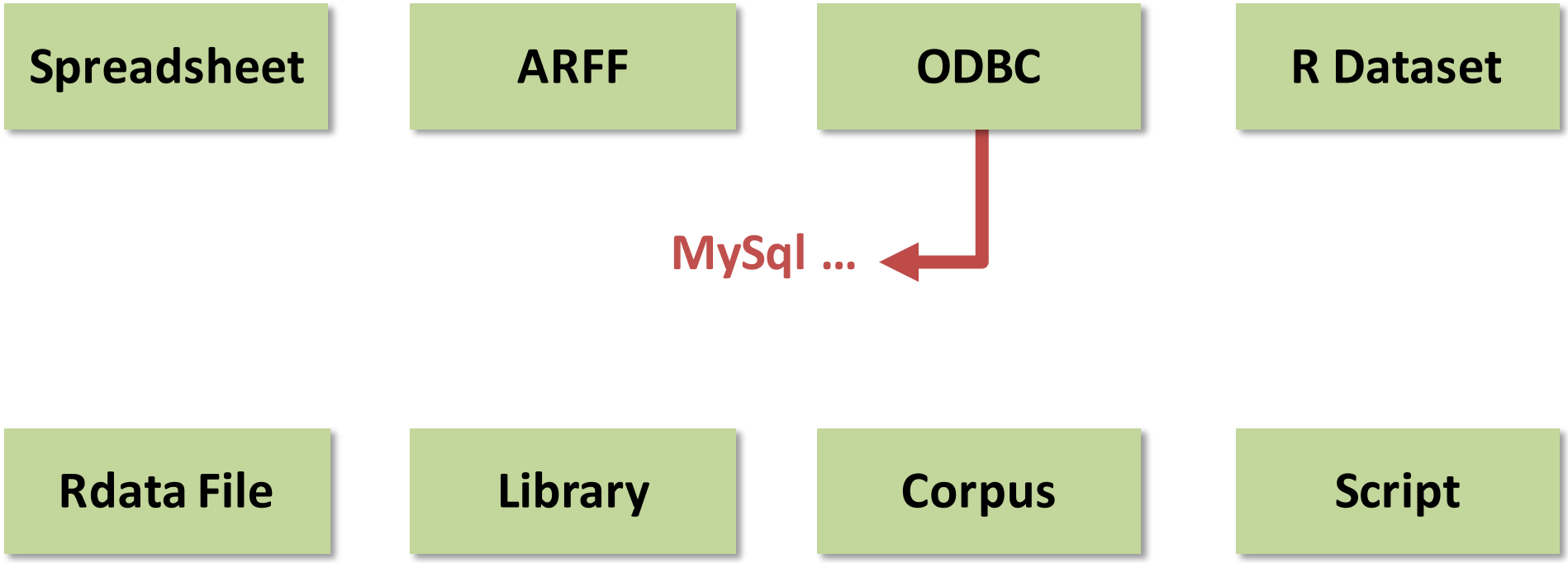
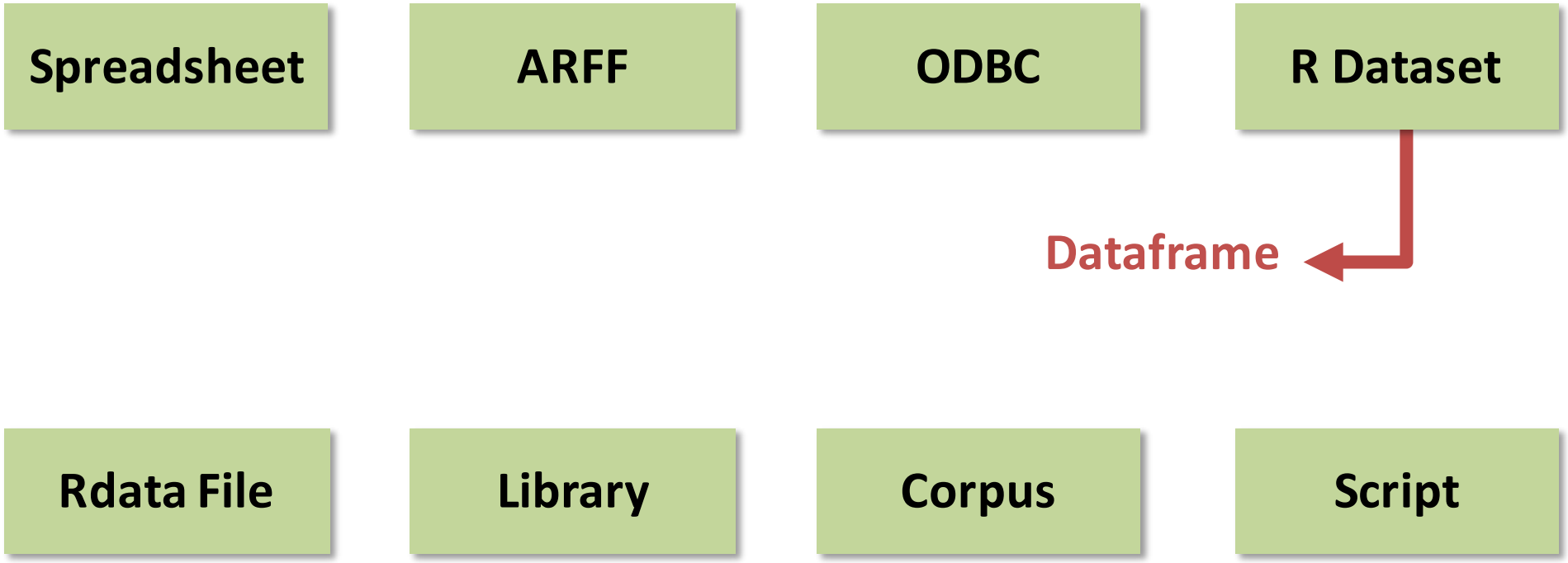
Import Data 載入數據



Import Data 載入數據



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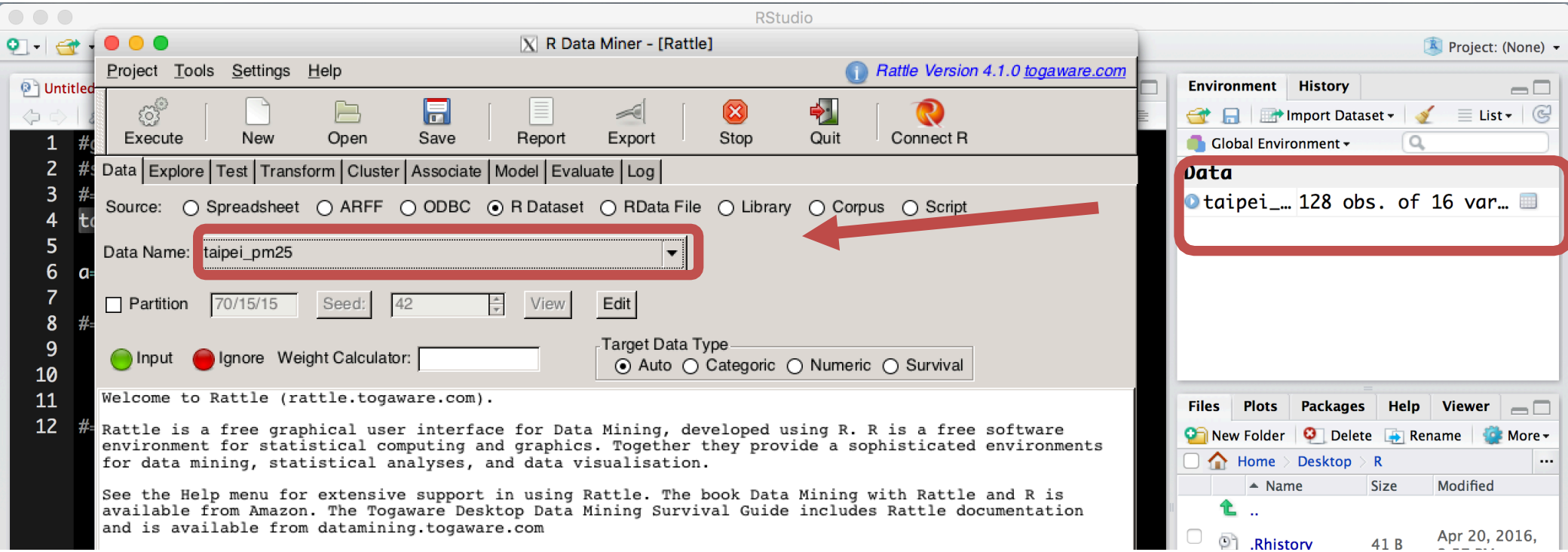
Import Data – R Dataset



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Import Data 載入數據

Spreadsheet | ARFF | ODBC | R Dataset

Rdata File | Library | Corpus | Script

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Import Data 載入數據

Spreadsheet

ARFF

ODBC

R Dataset

Rdata File

Library

Corpus

Script

套件中的資料

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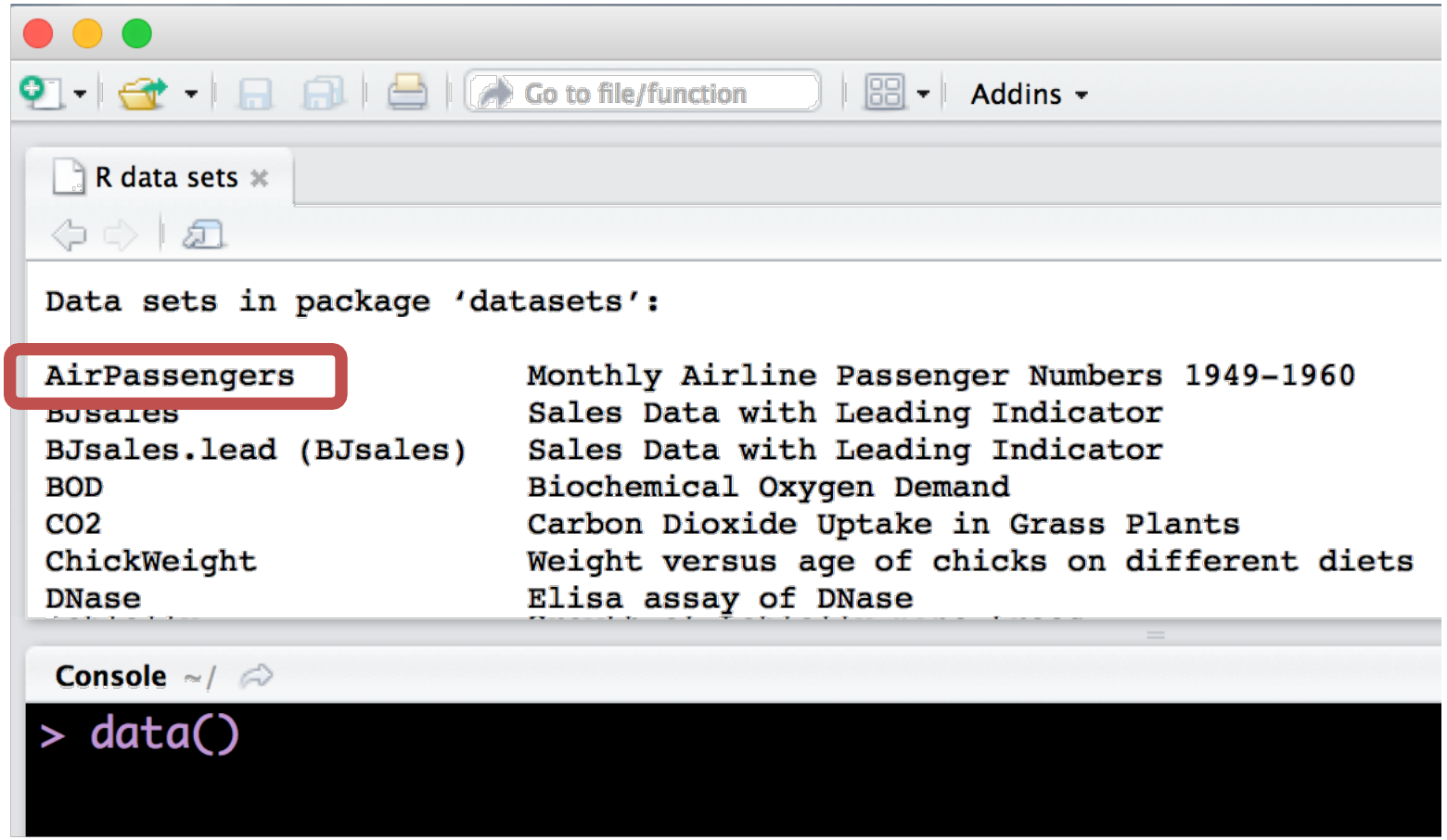
看目前可用資料集



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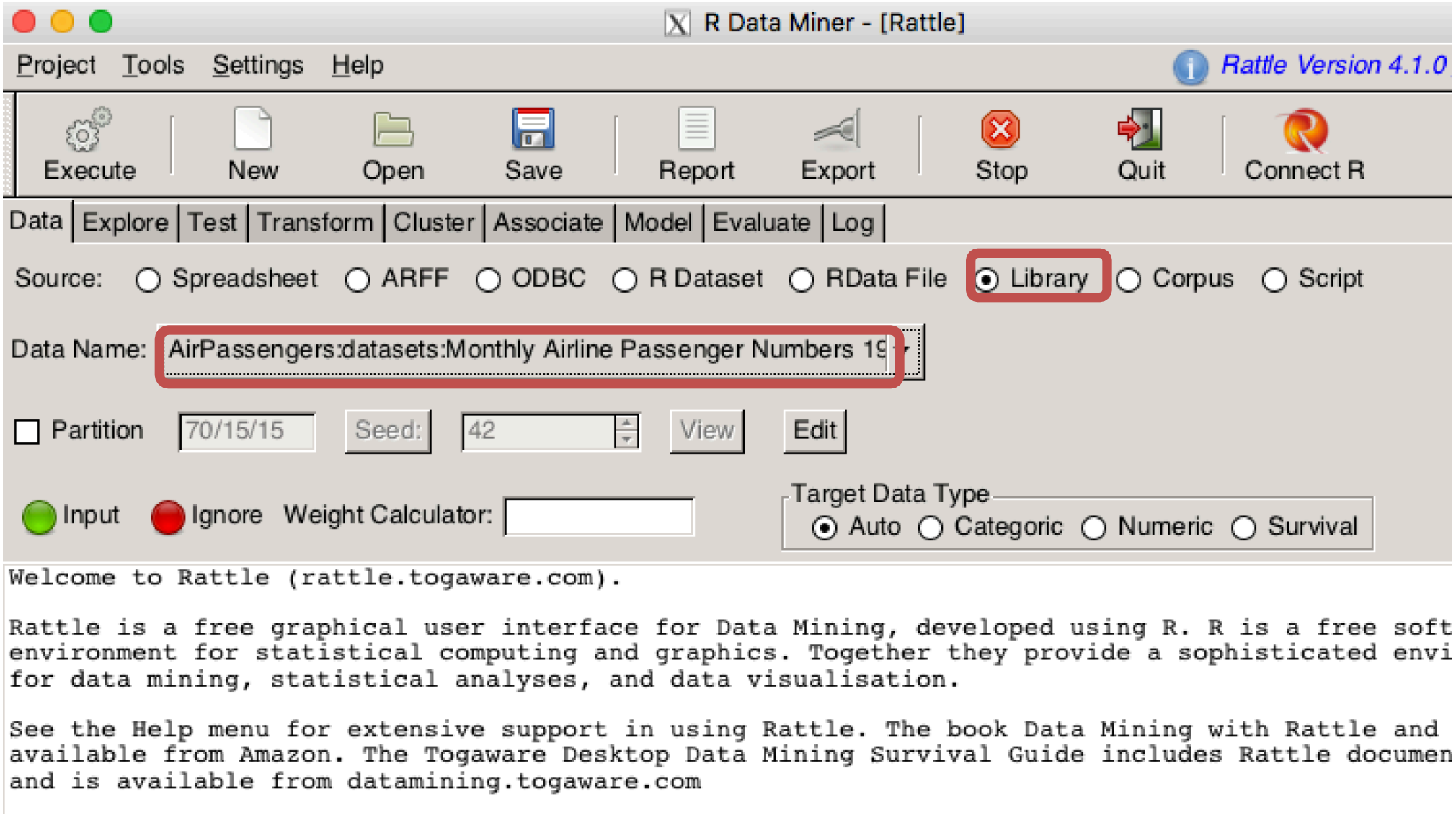
Import Data – R Dataset



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臺北市環保局空氣品質監測站－每月監測值統計

懸浮微粒

資料區間 ：104/01 ~ 105/04

測站 ：中正站、大直站、信義站、南港站、內湖站
木柵站、承德站、中北站

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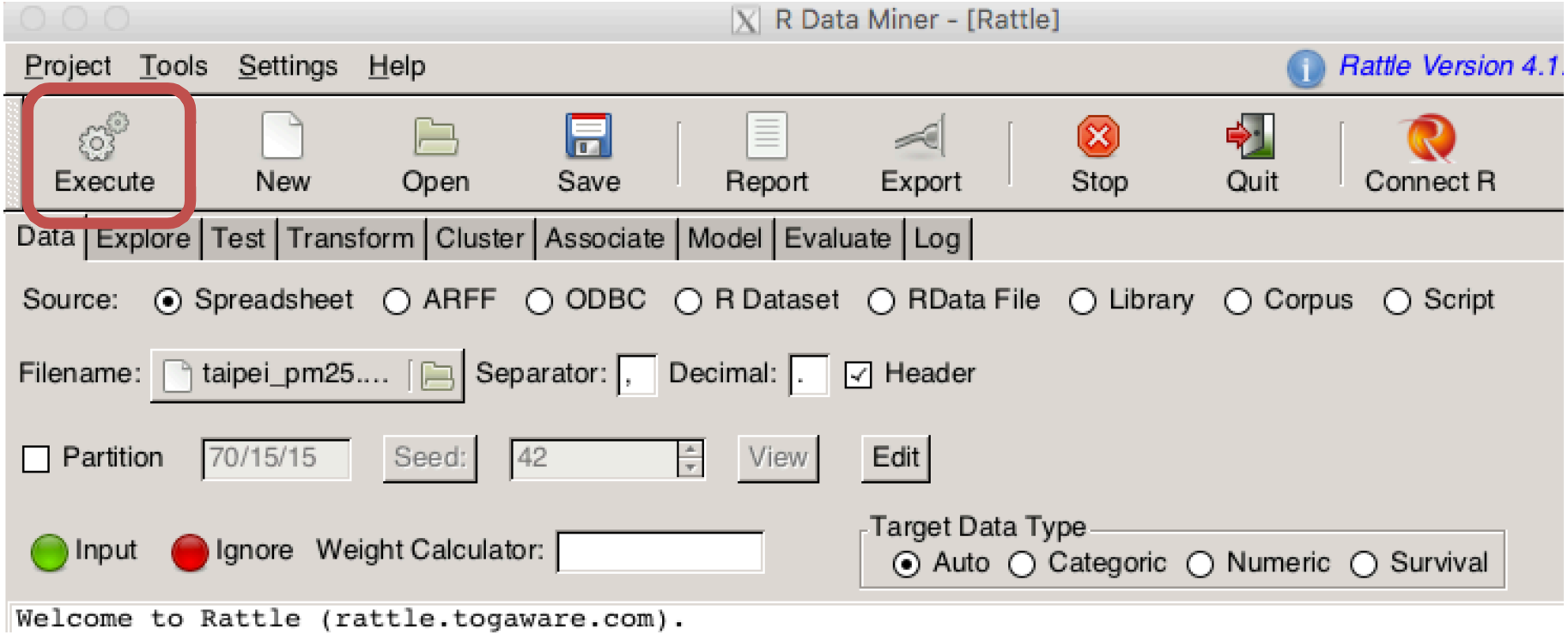
Import Data – 懸浮微粒



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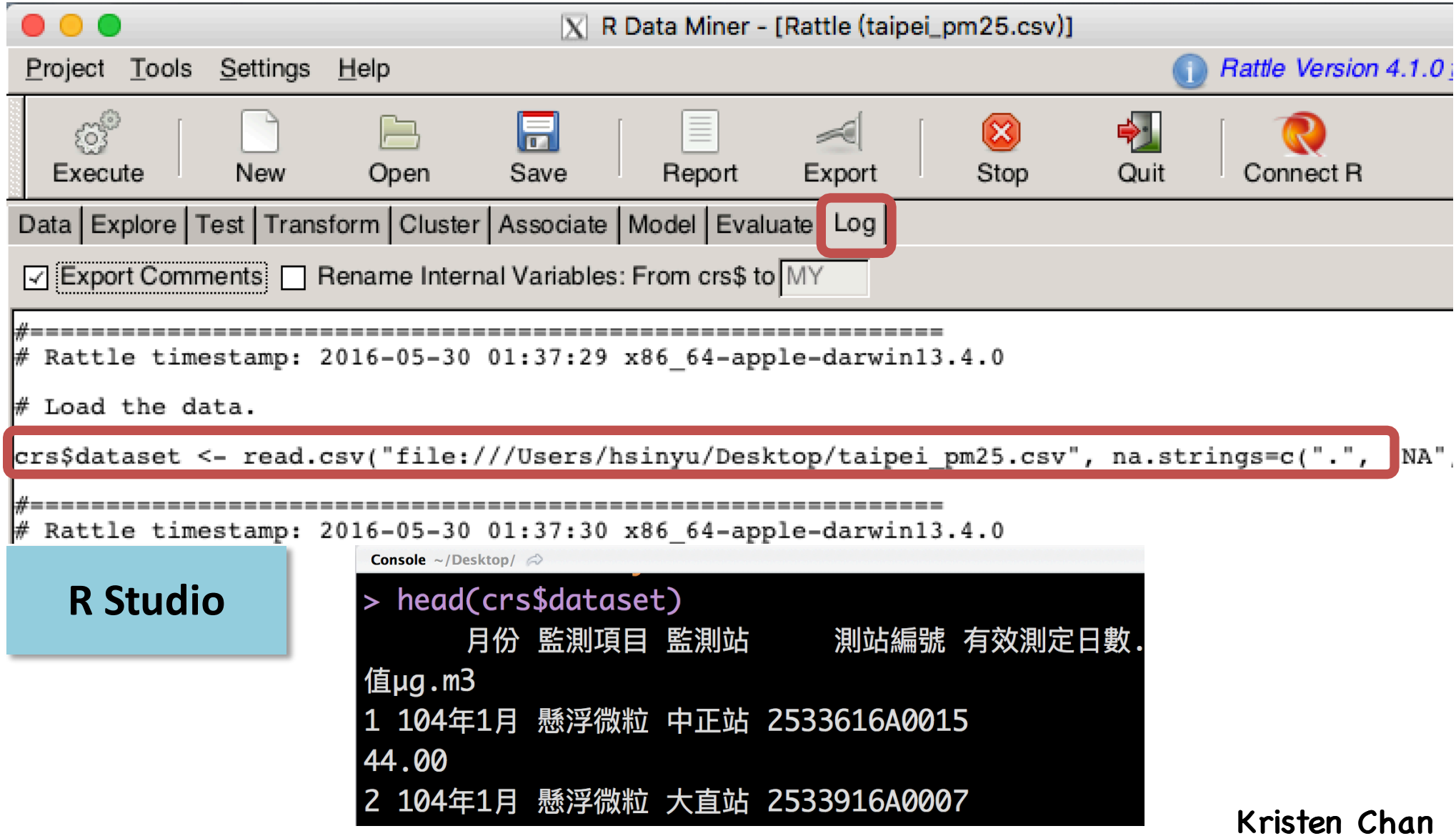
Import Data – 懸浮微粒



R Studio

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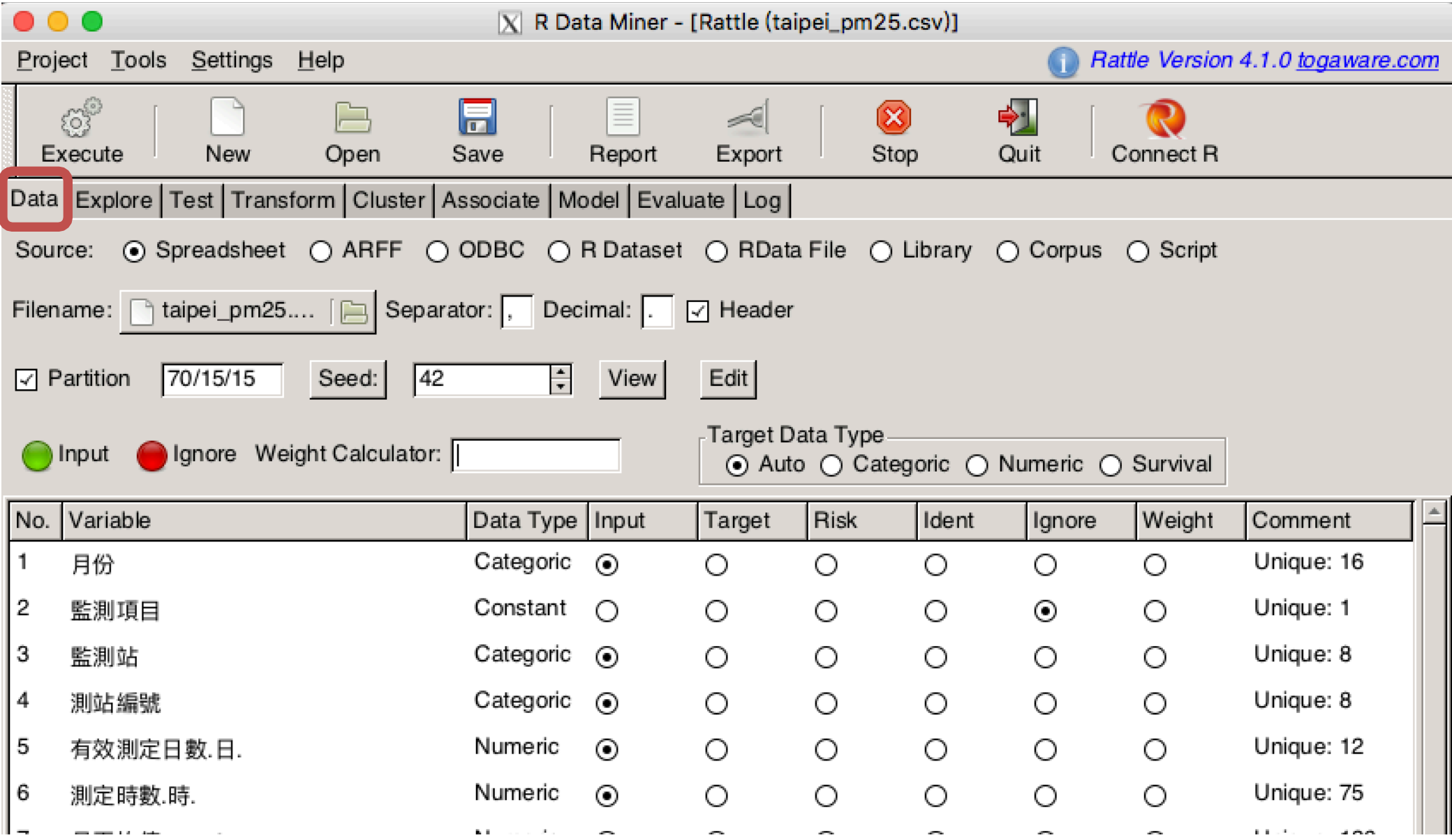
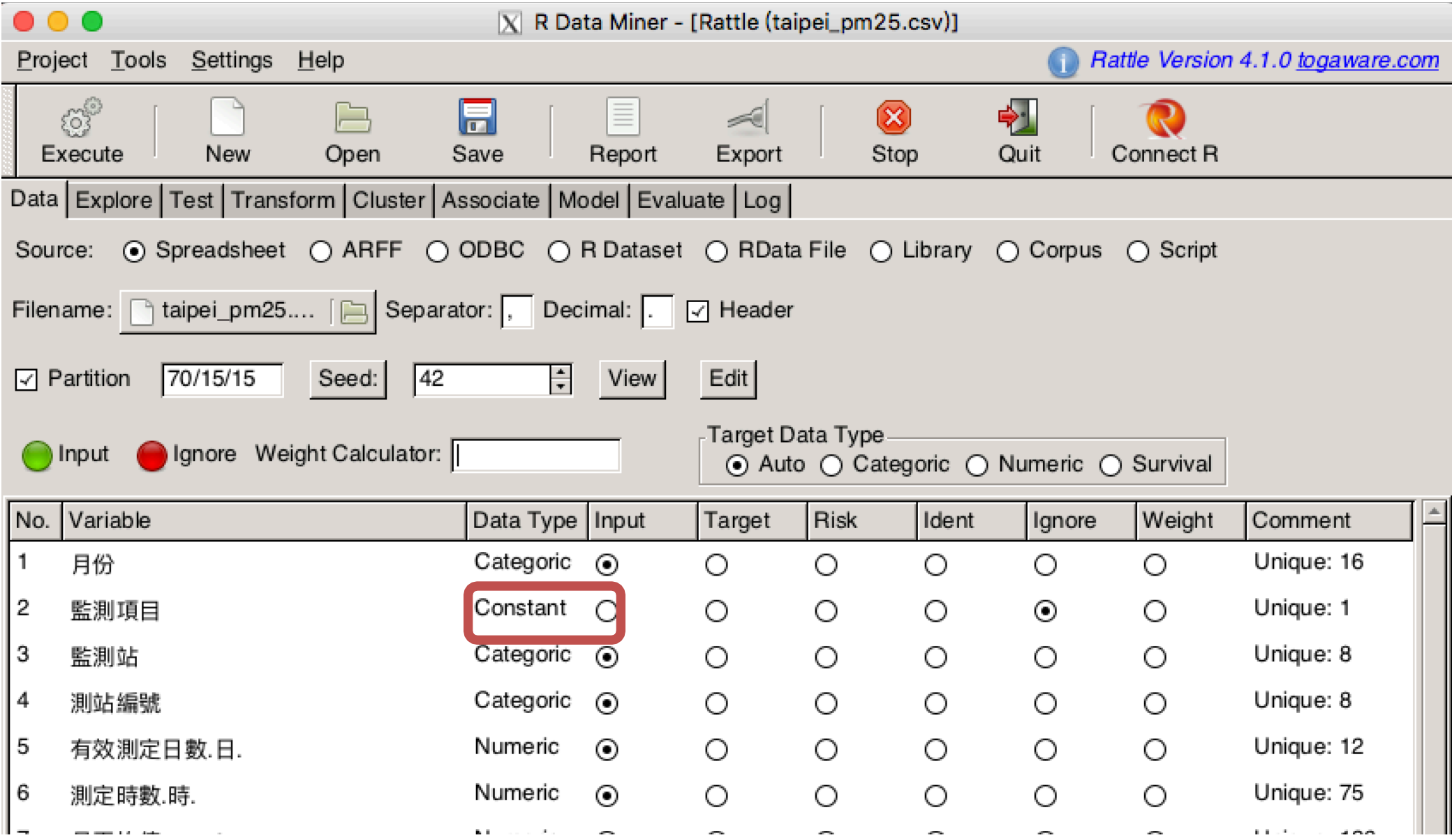
Import Data – 懸浮微粒



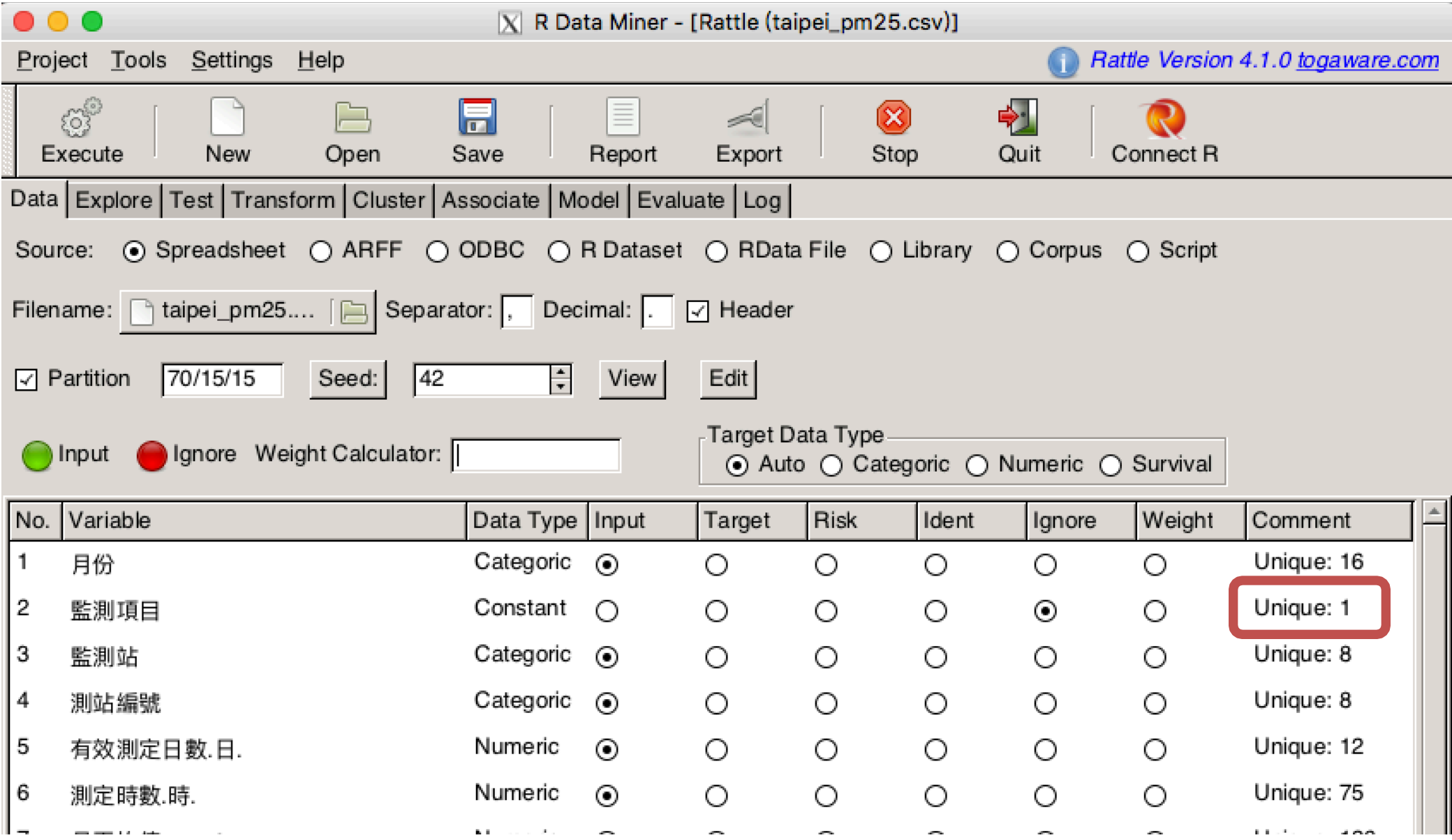
No.	Variable	Data Type	Input	Target	Risk	Ident	Ignore	Weight	Comment
1	月份	Categoric	◉	○	○	○	○	○	Unique: 16
2	監測項目	Constant	○	○	○	○	◉	○	Unique: 1
3	監測站	Categoric	◉	○	○	○	○	○	Unique: 8
4	測站編號	Categoric	◉	○	○	○	○	○	Unique: 8
5	有效測定日數.日.	Numeric	◉	○	○	○	○	○	Unique: 12
6	測定時數.時.	Numeric	◉	○	○	○	○	○	Unique: 75

Import Data – 懸浮微粒

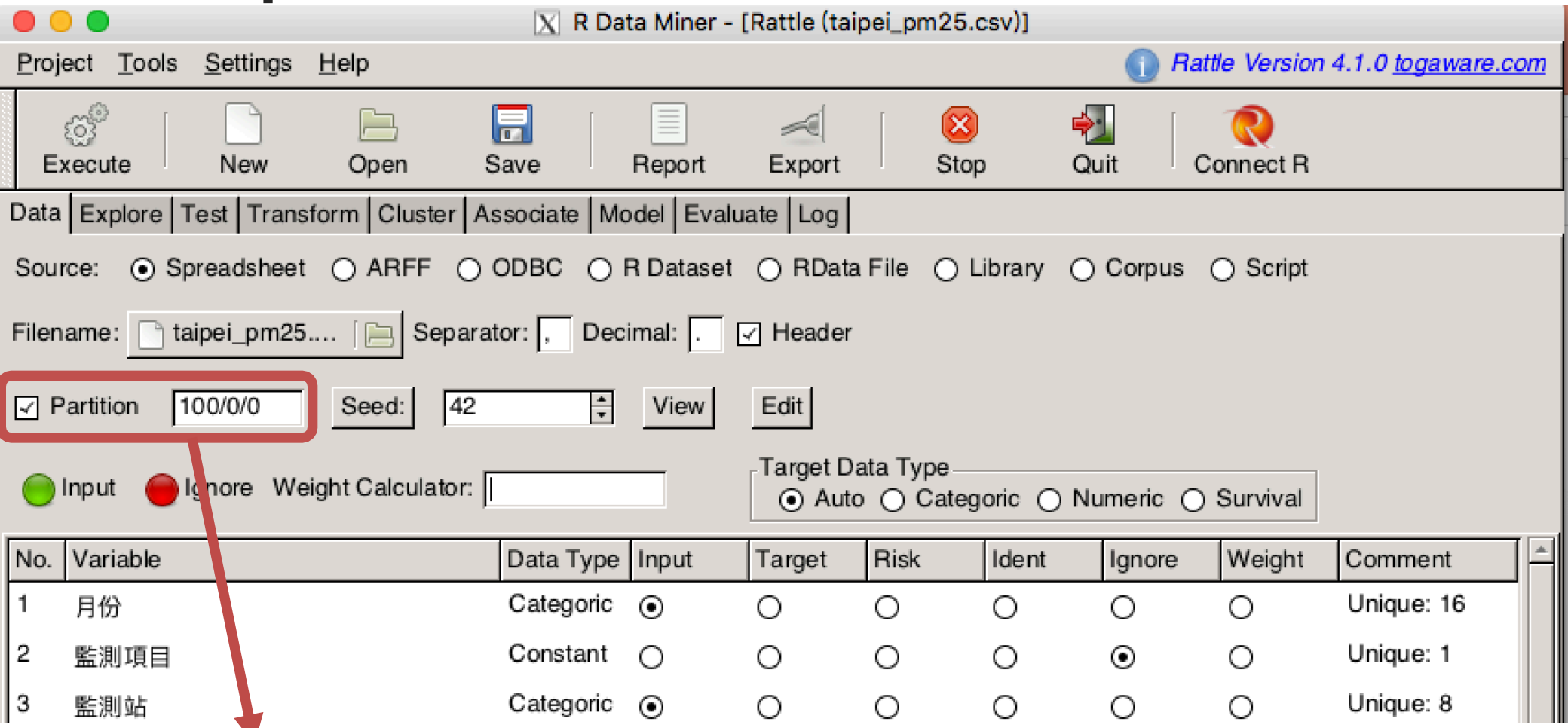


No.	Variable	Data Type	Input	Target	Risk	Ident	Ignore	Weight	Comment
1	月份	Categoric	◉	○	○	○	○	○	Unique: 16
2	監測項目	Constant	○	○	○	○	◉	○	Unique: 1
3	監測站	Categoric	◉	○	○	○	○	○	Unique: 8
4	測站編號	Categoric	◉	○	○	○	○	○	Unique: 8
5	有效測定日數.日.	Numeric	◉	○	○	○	○	○	Unique: 12
6	測定時數.時.	Numeric	◉	○	○	○	○	○	Unique: 75

Import Data – 懸浮微粒



Import Data – 懸浮微粒



training dataset / validation dataset / test dataset

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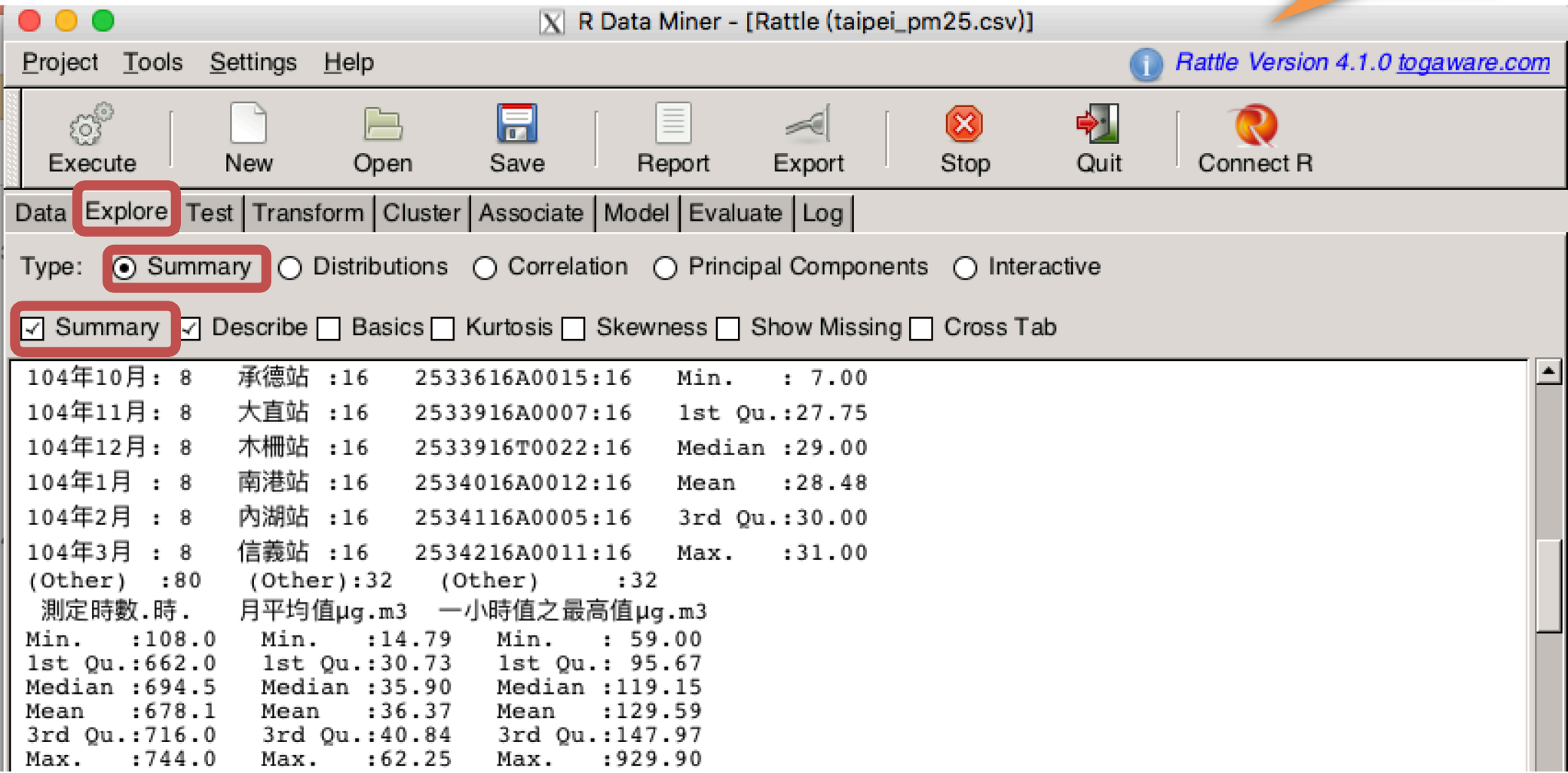
Explore Data – 懸浮微粒

Rattle

Summary



Explore Data – 懸浮微粒

R Studio

Summary

Console ~/

```
> summary(crs$dataset)
        月份              監測項目          監測站                測站編號
 104年10月: 8   懸浮微粒:128   承德站 :16   2533616A0015:16
 104年11月: 8                  大直站 :16   2533916A0007:16
 104年12月: 8                  木柵站 :16   2533916T0022:16
 104年1月 : 8                  南港站 :16   2534016A0012:16
```

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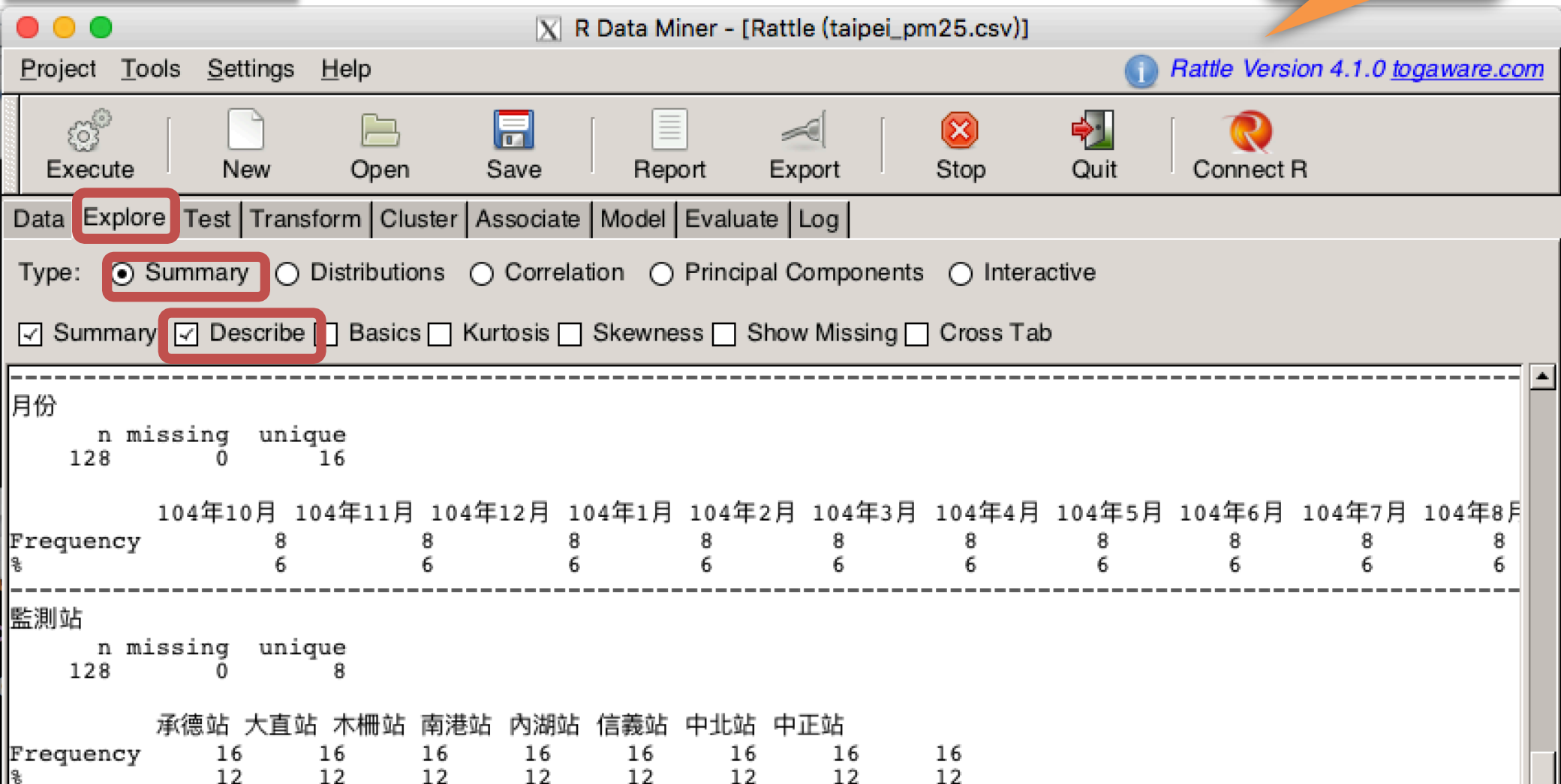
Explore Data – 懸浮微粒

Rattle

Describe



Explore Data – 懸浮微粒

R Studio

Describe

Console ~/

```
> describe(crs$dataset)
crs$dataset

 16  Variables       128  Observations
--------------------------------------------------------------------------------
月份
       n missing  unique
     128       0      16

          104年10月 104年11月 104年12月 104年1月 104年2月
Frequency         8         8         8        8        8
%                 6         6         6        6        6
```

Package: Himsc

Explore Data – 懸浮微粒

Rattle

Missing Value

Explore Data – 懸浮微粒

R Studio

Missing Value

Console ~/

```
> md.pattern(crs$dataset)
      月份 監測項目 監測站 測站編號 有效測定日數.日. 測定時數.時.
[1,]    1        1      1        1                1            1
[2,]    0        0      0        0                0            0
      月平均值μg.m3 一小時值之最高值μg.m3 一小時值之最高值.發生日.
[1,]             1                    1                       1
[2,]             0                    0                       0
      一小時值之最高值.發生時. 日平均值之最高值μg.m3
[1,]                        1                     1
[2,]                        0                     0
      日平均值之最高值.發生日期. 一小時值超過200μg.m3之小時時數.時.
[1,]                          1                                  1
[2,]                          0                                  0
```

Package: mice

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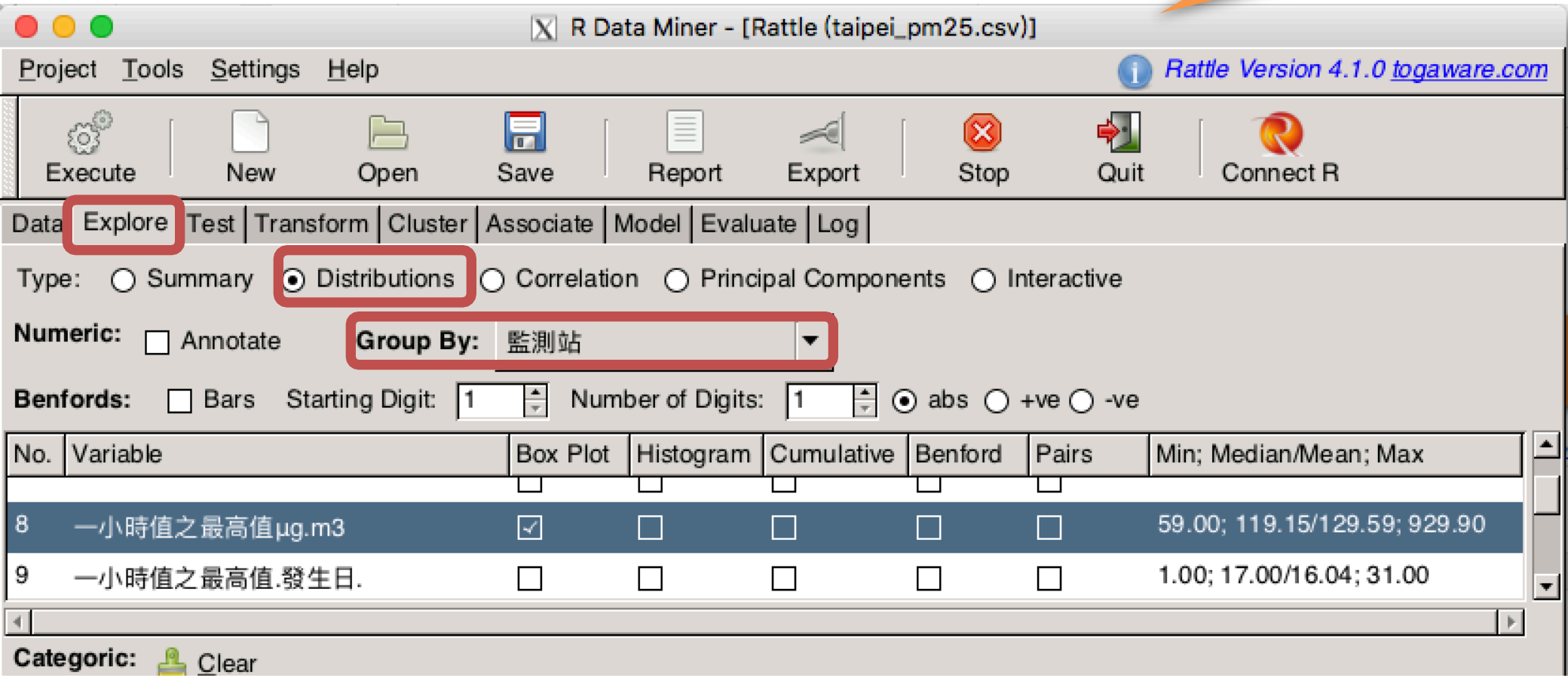
Explore Data – 懸浮微粒

Rattle

Boxplot



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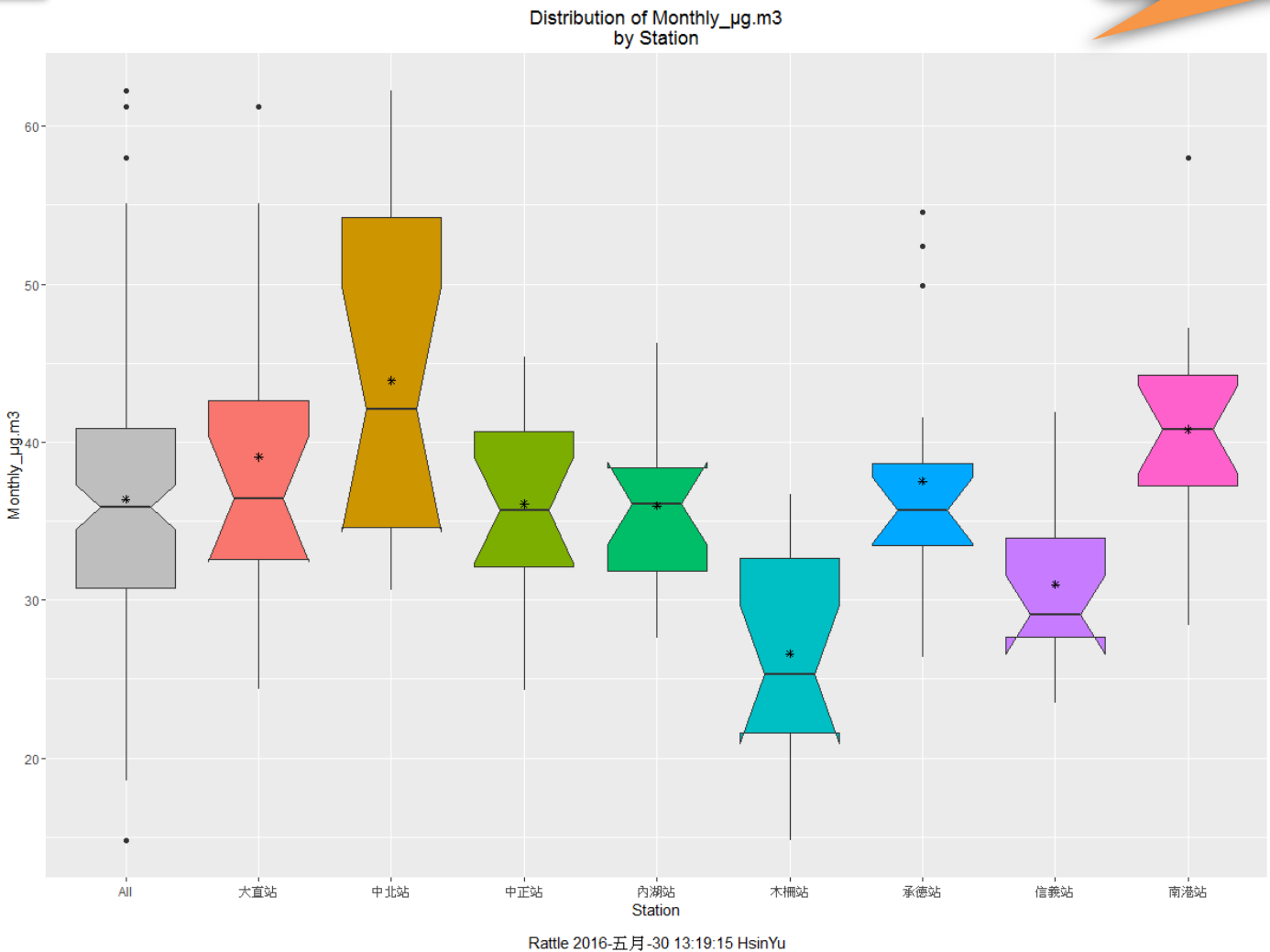
Explore Data – 懸浮微粒

Rattle

Boxplot



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鳶尾花(iris)

資料筆數：150

Sepal Length – 花萼長度<cm>
Sepal Width – 花萼寬度<cm>
Petal Length – 花瓣長度<cm>
Petal Width – 花瓣 寬度<cm>
Species – iris 種類< Setosa、Versicolor、Virginica >

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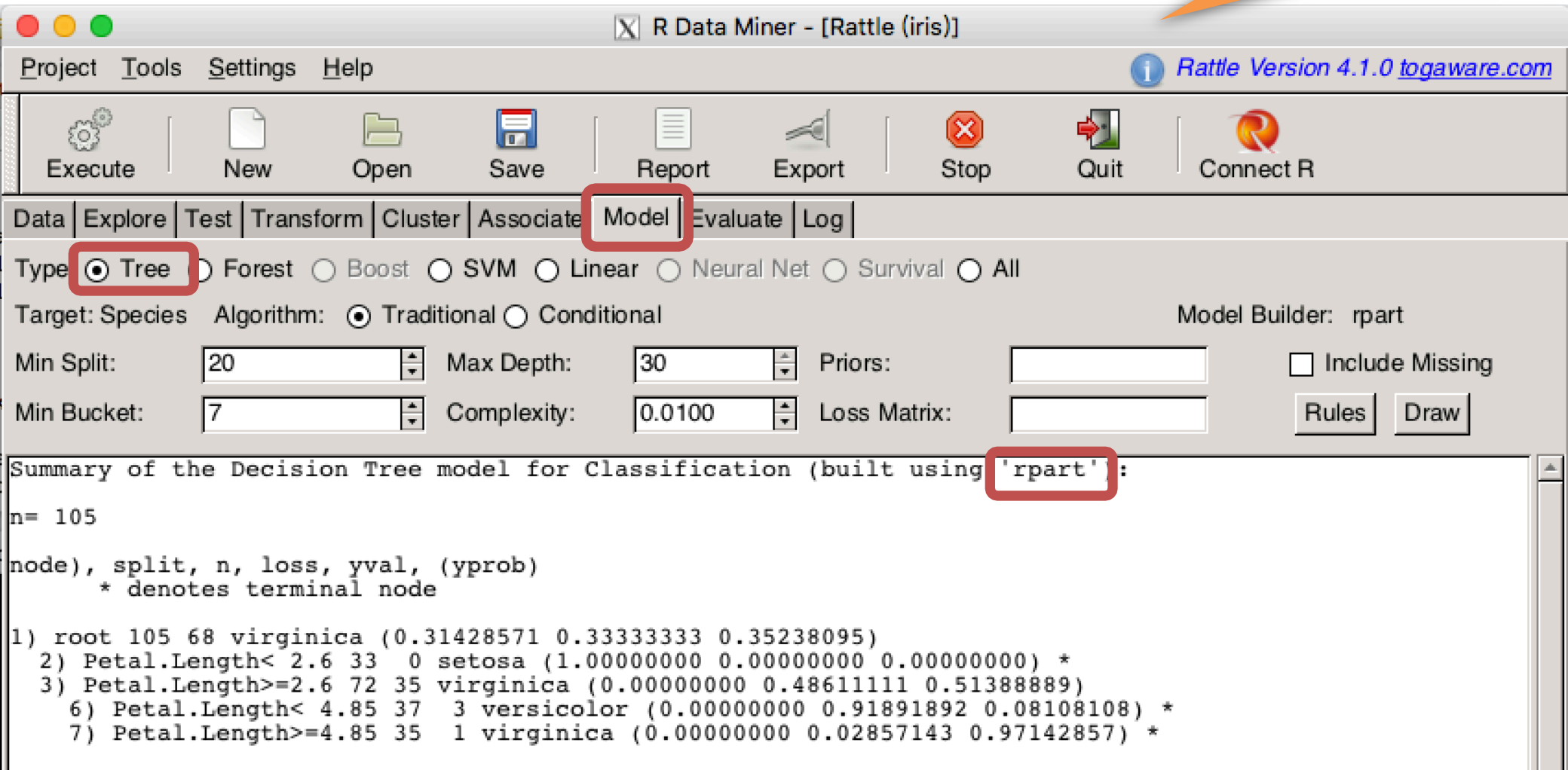
Model

Rattle

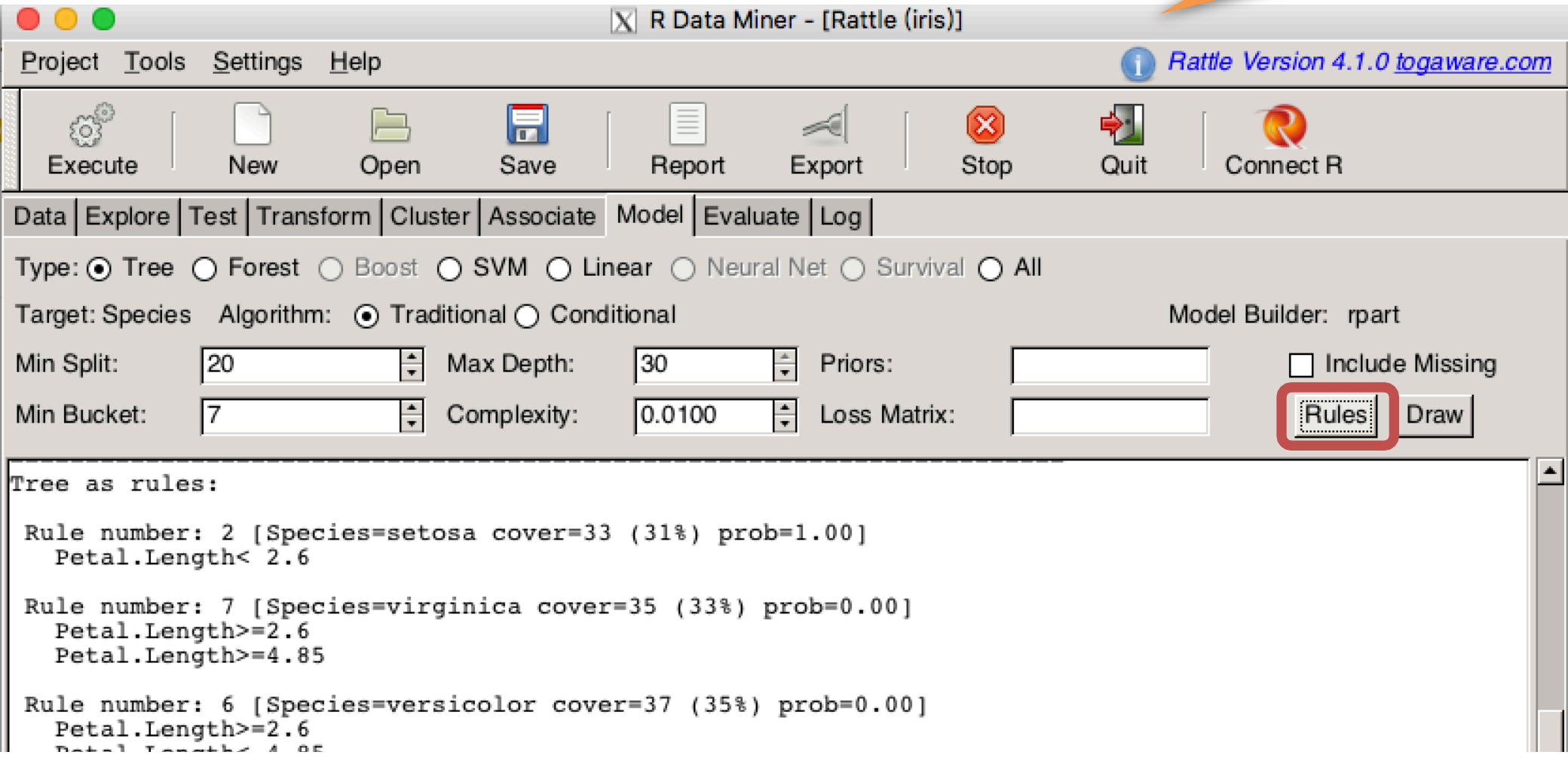
Decision Tree



Model

Rattle

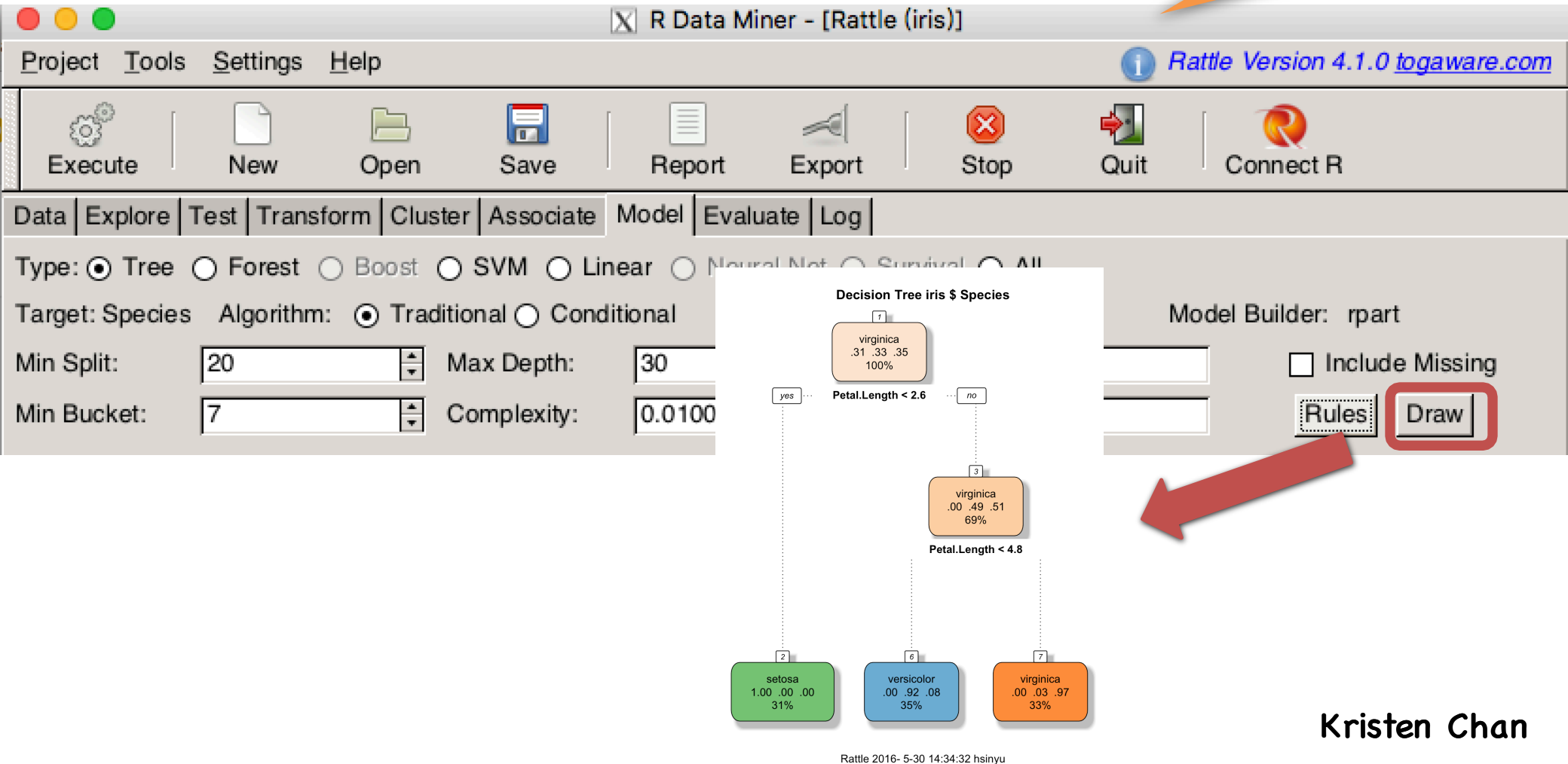
Decision Tree



Model

Rattle

Decision Tree



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