Building Data Analysis Applications on the NetBeans Platform

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29 May 2015

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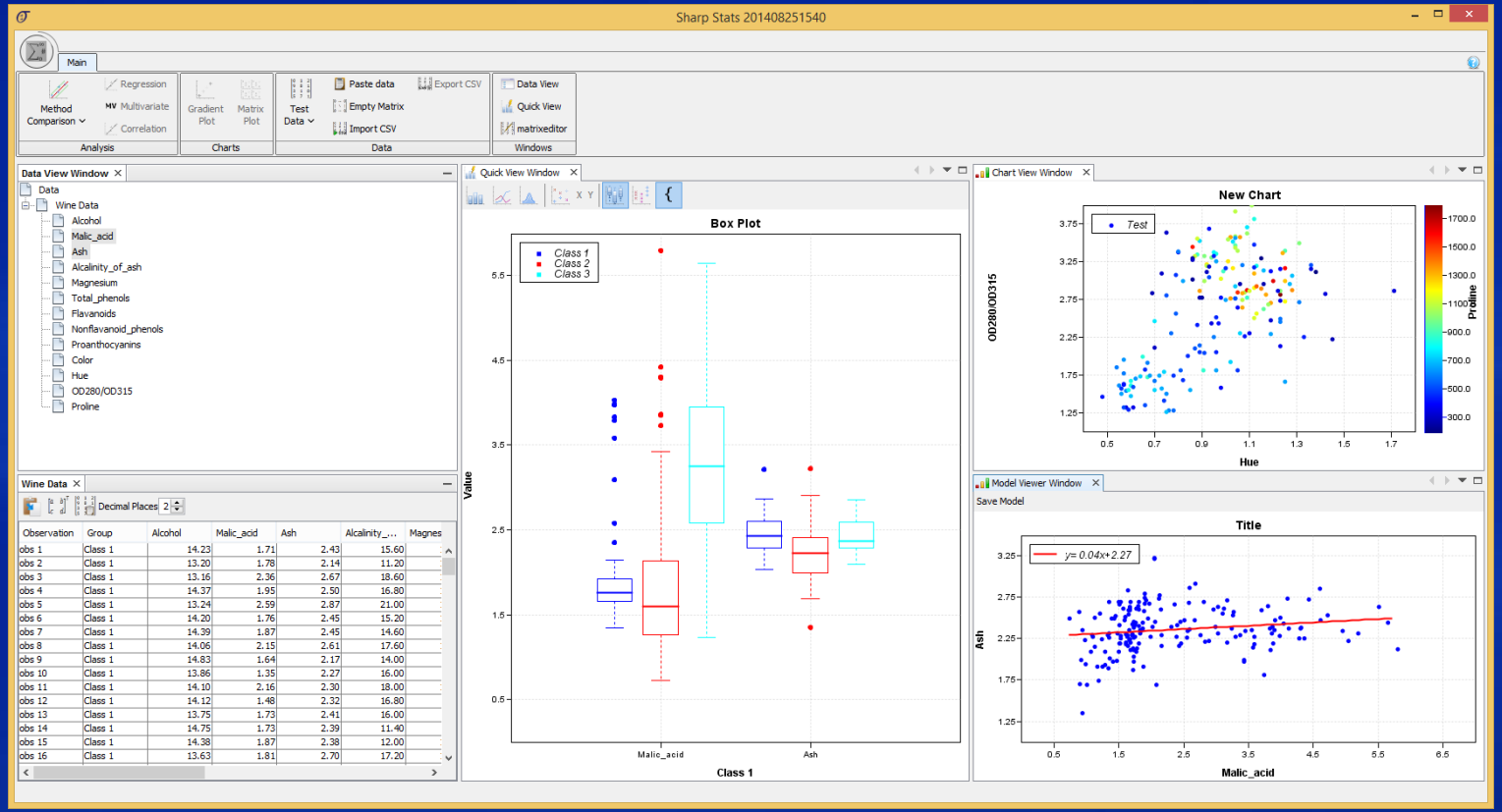
Background

- Worked as a statistician in manufacturing and pharmaceutical R&D for over 10 years.
- Use C# to build Add Ins for Microsoft Excel.
- Regulated and manufacturing environments often require desktop solutions.
- Built desktop applications from scratch.

Demo


Sharp Stats 201408251540
Main
Method Comparison
Regression
Multivariate
Correlation
Analysis
Gradient Plot
Matrix Plot
Charts
Test Data
Paste data
Empty Matrix
Import CSV
Export CSV
Data
Data View
Quick View
matrixeditor
Windows
Data View Window
Data
Wine Data
Alcohol
Malic_acid
Ash
Alcalinity_of_ash
Magnesium
Total_phenols
Flavanoids
Nonflavanoid_phenols
Proanthocyanins
Color
Hue
OD280/OD315
Proline
Wine Data
Decimal Places
Observation
Group
Alcohol
Malic_acid
Ash
Alcalinity_...
Magnes
obs 1 Class 1 14.23 1.71 2.43 15.60
obs 2 Class 1 13.20 1.78 2.14 11.20
obs 3 Class 1 13.16 2.36 2.67 18.60
obs 4 Class 1 14.37 1.95 2.50 16.80
obs 5 Class 1 13.24 2.59 2.87 21.00
obs 6 Class 1 14.20 1.76 2.45 15.20
obs 7 Class 1 14.39 1.87 2.45 14.60
obs 8 Class 1 14.06 2.15 2.61 17.60
obs 9 Class 1 14.83 1.64 2.17 14.00
obs 10 Class 1 13.86 1.35 2.27 16.00
obs 11 Class 1 14.10 2.16 2.30 18.00
obs 12 Class 1 14.12 1.48 2.32 16.80
obs 13 Class 1 13.75 1.73 2.41 16.00
obs 14 Class 1 14.75 1.73 2.39 11.40
obs 15 Class 1 14.38 1.87 2.38 12.00
obs 16 Class 1 13.63 1.81 2.70 17.20
Quick View Window
Box Plot
Class 1
Class 2
Class 3
Value
Malic_acid
Ash
Class 1
Chart View Window
New Chart
Test
OD280/OD315
Hue
Proline
Model Viewer Window
Save Model
Title
y= 0.04x+2.27
Ash
Malic_acid

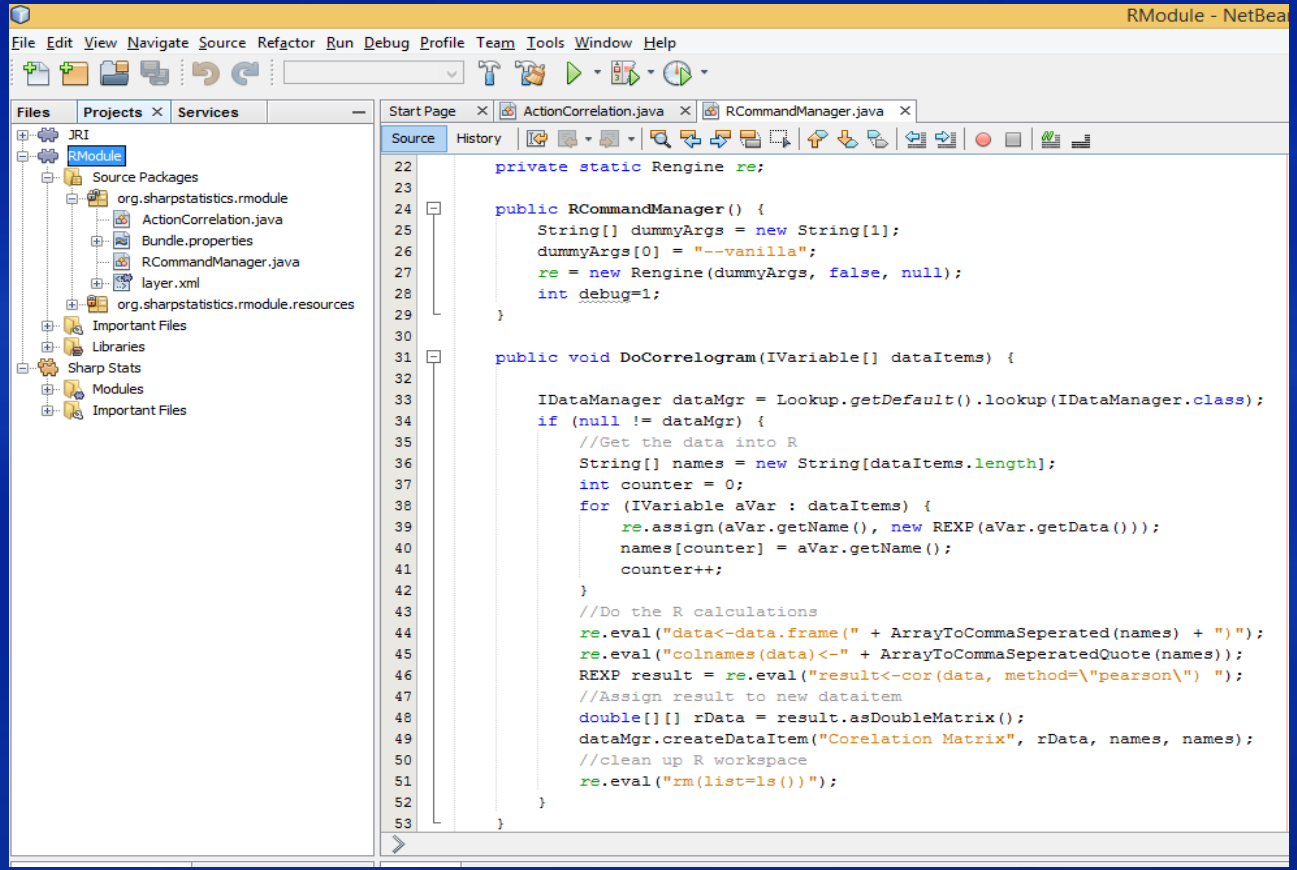
Why use NetBeans Platform

- Why build all the infrastructure of a desktop application when NetBeans offers it all.
- All standard desktop functionality
  - Modular structure
  - Window System
  - Node System
  - Communication between modules and windows
  - ….

Flexibility

- Simple to add unexpected future requirements
- Adding a connection to R
  - Generate a new library module, using RJava
  - Generate a new R module
  - Add an Action
  - Add a method
- All added in 30 minutes.

Adding R code



Summary

- Building on the NetBeans Platform allows me to
  - Implement standard functionality using reliable and tested APIs.
  - Concentrate on the data analysis tasks rather than the infrastructure.
  - Build better solutions faster.
  - For the client faster means cheaper.