

Deducer

Interfejs graficzny do analizy danych dla R

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Czym jest Deducer?

Inne podobne pakiety



R Commander



Rattle



RKWard

Inne podobne pakiety

	R Commander	Rattle	RKward	Deducer
<i>Environment and features</i>				
Integrated into any console	no	no	no	yes
Cross-platform				
Windows	yes	yes	yes	yes
Mac	Non-native	Non-native	no	yes
Linux	yes	yes	yes	yes
Drag-and-drop	no	no	no	yes
HTML output	no	no	yes	no
Formatted output tables	no	no	yes	yes
Dialogs have memory	no	yes	yes	yes
GUI toolkit	Tcl/Tk	GTK	KDE	Java Swing
<i>Functionality</i>				
Univariate analysis	yes	yes	yes	yes
Longitudinal analysis	limited ¹	no	limited ¹	no
Plots	yes	limited ²	yes	yes
Analysis visualizations	limited ²	limited ²	no	yes
Data manipulation	yes	yes	no	yes
Spreadsheet	yes	no	yes	yes
<i>Extensibility</i>				
Has plug-in architecture	yes	no	yes	yes
Extendable from within R	yes	no	no	yes
Number of plug-ins	32	0	0 ³	5 + 5 ⁴

Inne podobne pakiety



R Commander



Rattle



Rkward

Inne podobne pakiety



R Commander



Rattle



Rkward

Inne podobne pakiety



R Commander

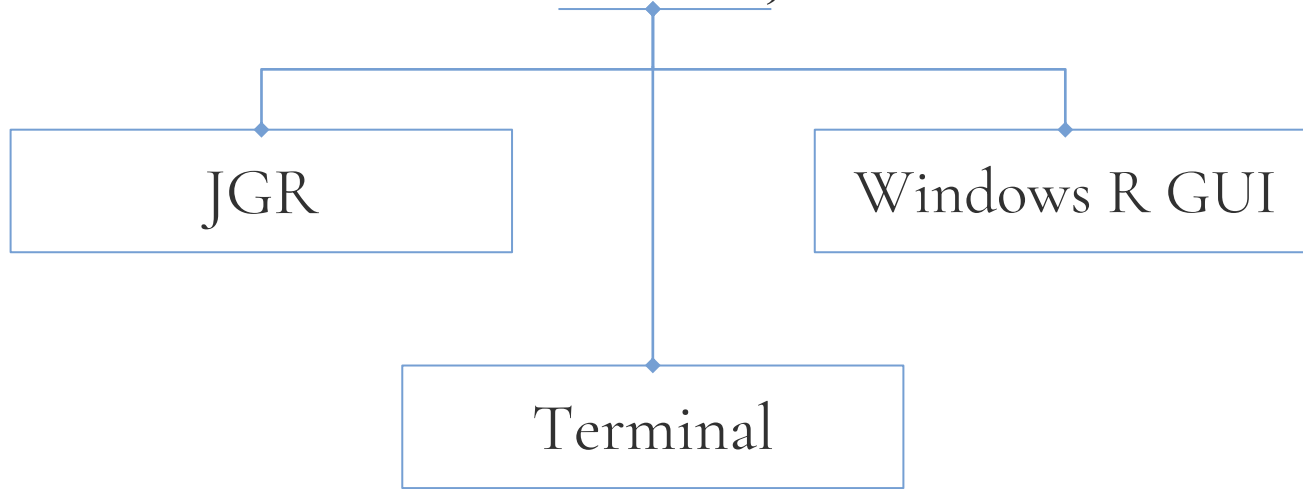


Rattle



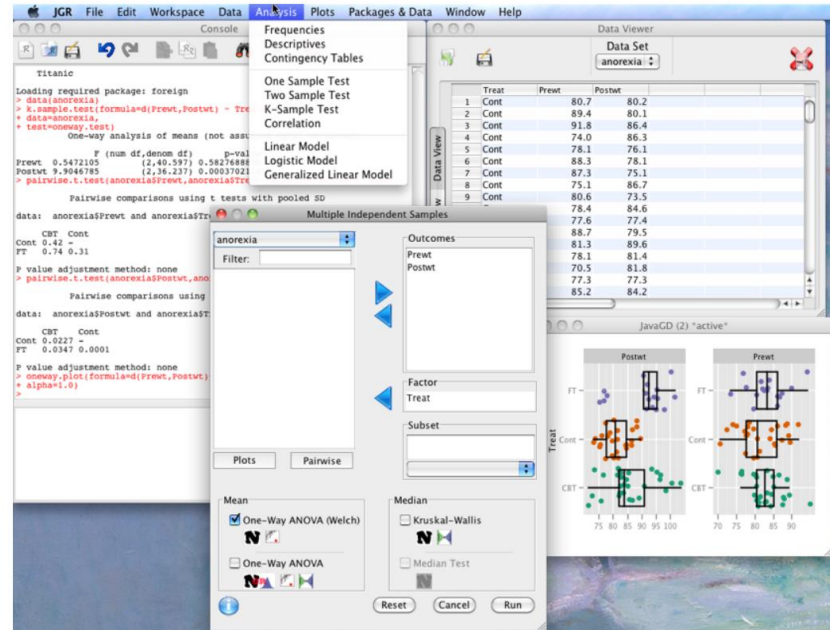
RKWard

Instalacja



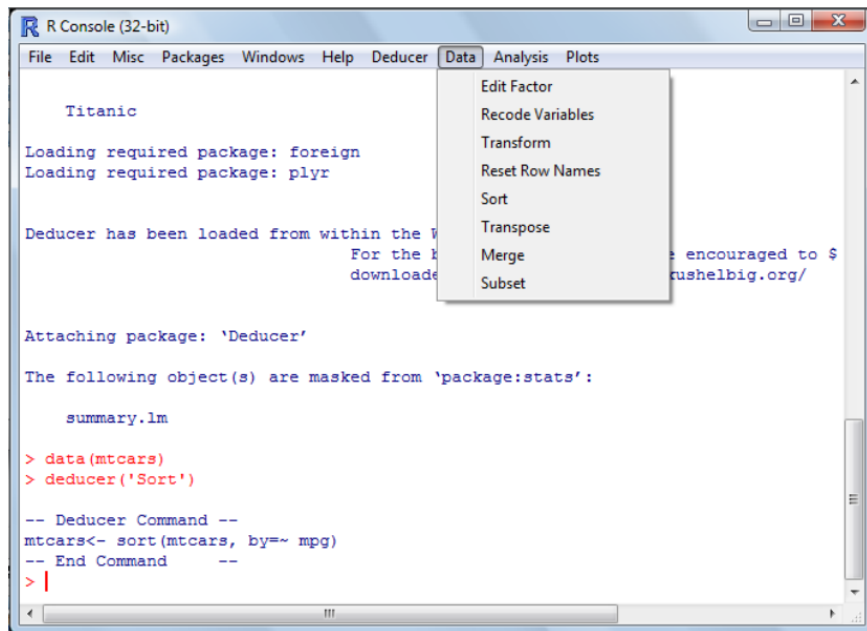
Instalacja

JGR



Instalacja

Windows R GUI



```
R Console (32-bit)
File Edit Misc Packages Windows Help Deducer Data Analysis Plots

Titanic
Loading required package: foreign
Loading required package: plyr

Deducer has been loaded from within the R session. For the full documentation, please see the package vignette. We encourage you to download the latest version from http://www.stat.columbia.edu/~kushelbig.org/

Attaching package: 'Deducer'

The following object(s) are masked from 'package:stats':

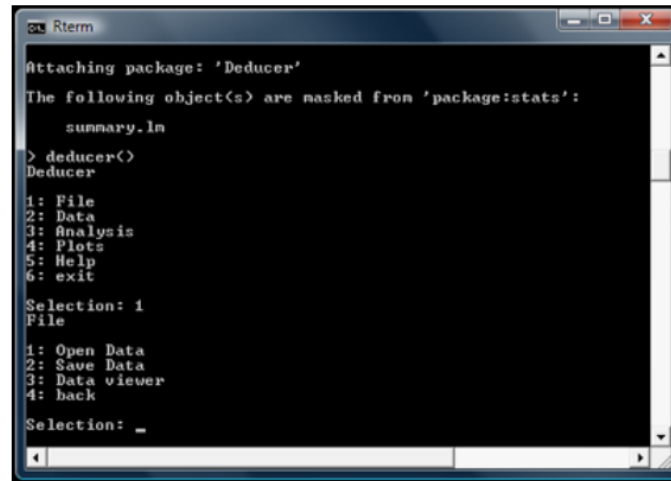
    summary.lm

> data(mtcars)
> deducer('Sort')

-- Deducer Command --
mtcars<- sort(mtcars, by=~ mpg)
-- End Command --
> |
```

Instalacja

Terminal



```
Rterm
Attaching package: 'Deducer'

The following object(s) are masked from 'package:stats':

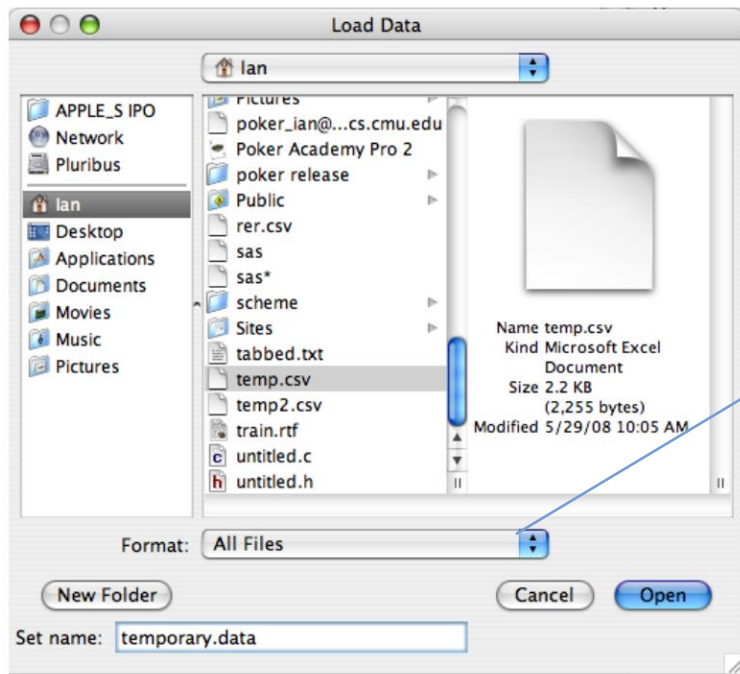
    summary.lm

> deducer()
Deducer
1: File
2: Data
3: Analysis
4: Plots
5: Help
6: exit
Selection: 1
File
1: Open Data
2: Save Data
3: Data viewer
4: back
Selection: _
```



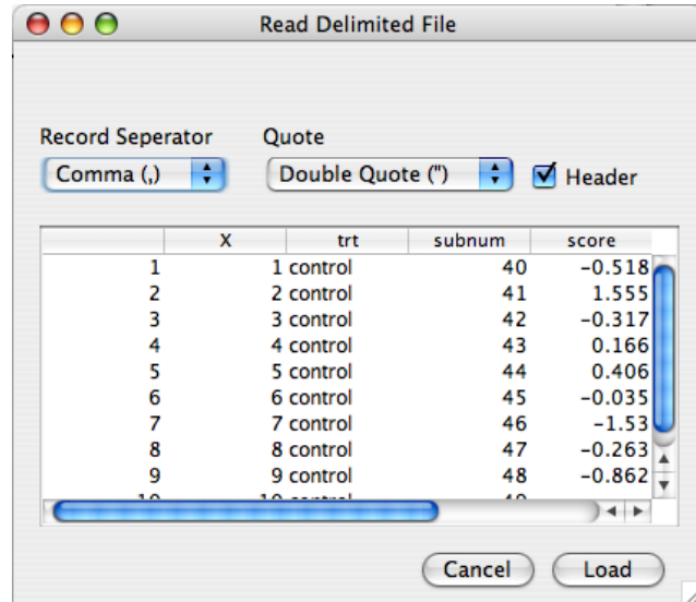
Wczytywanie i zapisywanie ramek danych

Okno dialogowe Open Data



File type	Extension	R function
R workspace	*.rda and *.rdata	load()
R object	*.robj	dget()
Comma seperated	*.csv	read.table()
Text file	*.txt	read.table()
SPSS	*.sav	read.spss()
SAS export	*.xpt	read.xport()
DBase	*.dbf	read.dbf()
Stata	*.dta	read.dta()
Systat	*.sys and *.syd	read.systat()
ARFF	*.arff	read.arff()
Epiinfo	*.rec	read.eipinfo()
Minitab	*.mtp	read.mtp()
S data dump	*.s3	read.S()

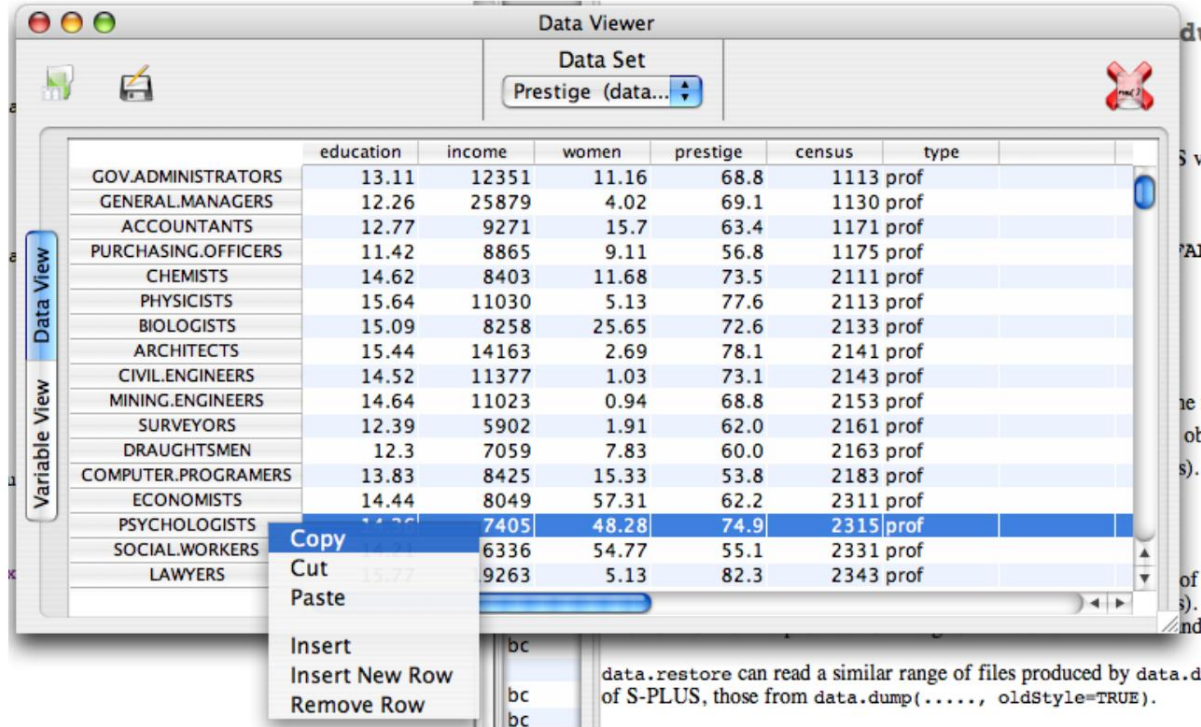
Okno dialogowe Open Data



Okno dialogowe Save Data

File type	Extension	R function
R workspace	*.rda and *.rdata	save()
R object	*.robj	dput()
Comma seperated	*.csv	write.table()
Tab delimited	*.txt	write.table()
DBase	*.dbf	write.dbf()
Stata	*.dta	write.dta()
ARFF	*.arff	write.arff()

Okno dialogowe Data Viewer



The screenshot shows the 'Data Viewer' dialog box with the 'Data Set' dropdown set to 'Prestige (data...)'. The table displays the following data:

	education	income	women	prestige	census	type
GOV.ADMINISTRATORS	13.11	12351	11.16	68.8	1113	prof
GENERAL.MANAGERS	12.26	25879	4.02	69.1	1130	prof
ACCOUNTANTS	12.77	9271	15.7	63.4	1171	prof
PURCHASING.OFFICERS	11.42	8865	9.11	56.8	1175	prof
CHEMISTS	14.62	8403	11.68	73.5	2111	prof
PHYSICISTS	15.64	11030	5.13	77.6	2113	prof
BIOLOGISTS	15.09	8258	25.65	72.6	2133	prof
ARCHITECTS	15.44	14163	2.69	78.1	2141	prof
CIVIL.ENGINEERS	14.52	11377	1.03	73.1	2143	prof
MINING.ENGINEERS	14.64	11023	0.94	68.8	2153	prof
SURVEYORS	12.39	5902	1.91	62.0	2161	prof
DRAUGHTSMEN	12.3	7059	7.83	60.0	2163	prof
COMPUTER.PROGRAMERS	13.83	8425	15.33	53.8	2183	prof
ECONOMISTS	14.44	8049	57.31	62.2	2311	prof
PSYCHOLOGISTS	14.44	7405	48.28	74.9	2315	prof
SOCIAL.WORKERS	15.77	6336	54.77	55.1	2331	prof
LAWYERS	15.77	9263	5.13	82.3	2343	prof

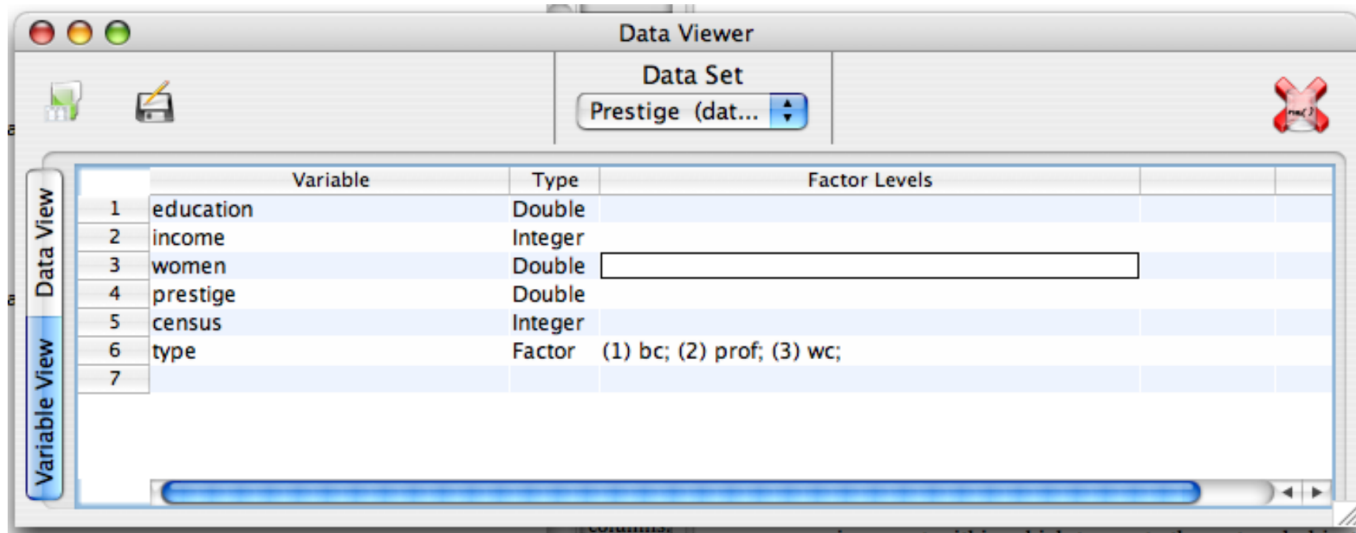
A context menu is open over the table, showing the following options:

- Copy
- Cut
- Paste
- Insert
- Insert New Row
- Remove Row

Below the table, there is a text box containing the following text:

```
data.restore can read a similar range of files produced by data.d  
of S-PLUS, those from data.dump(....., oldStyle=TRUE).
```


Informacje o zmiennych



The screenshot shows the 'Data Viewer' window in SPSS. The title bar reads 'Data Viewer'. Below the title bar, there is a 'Data Set' dropdown menu showing 'Prestige (dat...'. To the left of the main table, there is a vertical sidebar with two buttons: 'Variable View' (selected) and 'Data View'. The main table has four columns: 'Variable', 'Type', and 'Factor Levels'. The table lists seven variables: education, income, women, prestige, census, type, and an empty row. The 'type' variable is a factor with levels (1) bc; (2) prof; (3) wc;.

	Variable	Type	Factor Levels
1	education	Double	
2	income	Integer	
3	women	Double	
4	prestige	Double	
5	census	Integer	
6	type	Factor	(1) bc; (2) prof; (3) wc;
7			

Deducer

```
graph TD; Deducer --> GUI; Deducer --> nowe_funkcje_R[nowe funkcje R]; GUI --> okna_dialogowe[okna dialogowe zorganizowane koncepcyjnie]; nowe_funkcje_R --> p_value[średnie p-value dla testów dokładnych]; nowe_funkcje_R --> permutacyjne_testy_t[permutacyjne testy t];
```

GUI

okna dialogowe
zorganizowane
koncepcyjnie

nowe funkcje R

- średnie p-value dla testów dokładnych
- permutacyjne testy t

Przygotowanie danych

edycja
faktorów

przekodowywanie
wartości

transformacje

wybieranie
podzbioru

resetowanie
nazw wierszy

sortowanie

łączenie kolumn

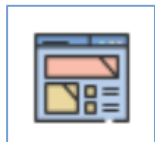
transpozycja

Analizy i ich wizualizacje



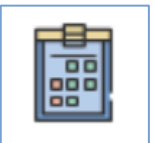
Tabele licznosci

Tablice kontyngencji



Podstawowe statystyki

Testy jednej próbki



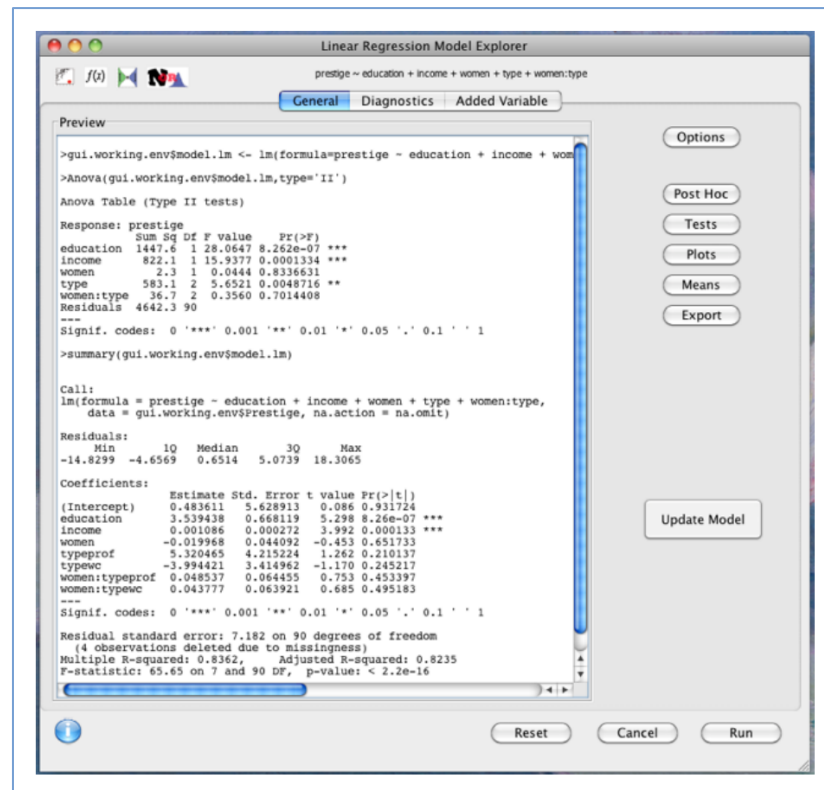
Korelacje zmiennych

Testy K próbek

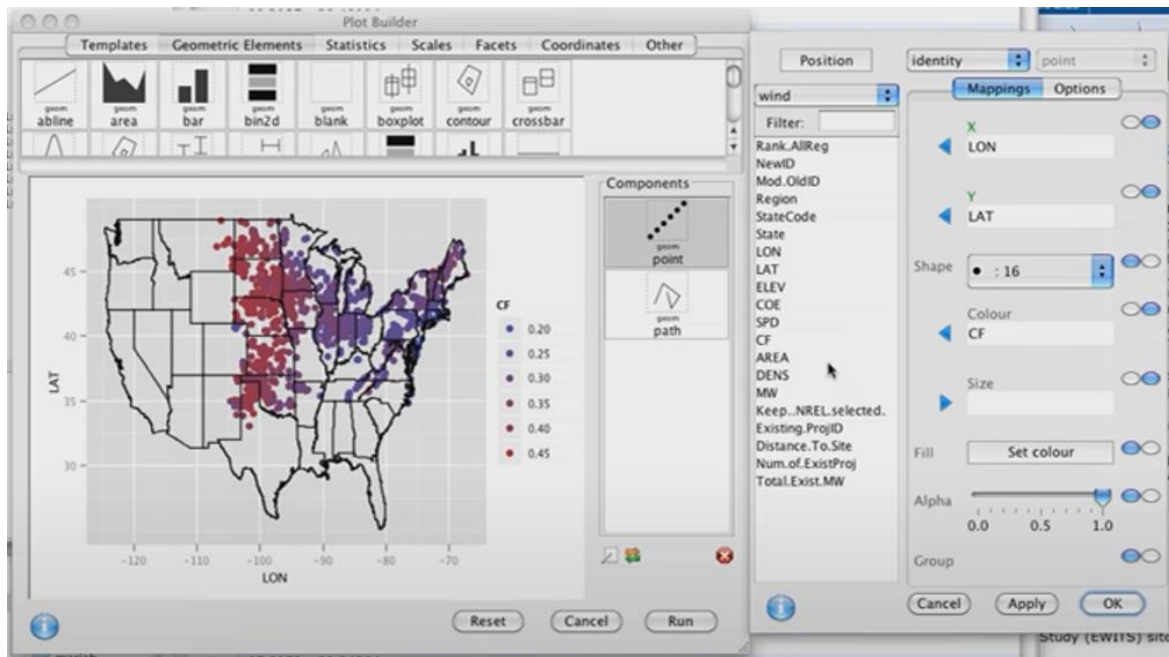


Modele

- regresja liniowa
- regresja logistyczna
- uogólniony model liniowy



Tworzenie wykresów



Rozszerzalność

R Variable	Class	Description
DeducerMain	org.rosuda.deducer.widgets.Deducer	Deducer's main class
RDialog	org.rosuda.deducer.widgets.RDialog	A dialog to put widgets in
SimpleRDialog	org.rosuda.deducer.widgets.SimpleRDialog	A window for building simple dialogs in R
VariableSelectorWidget	org.rosuda.deducer.widgets.VariableSelectorWidget	Filterable list of the variables in a data frame
VariableListWidget	org.rosuda.deducer.widgets.VariableListWidget	A list of variables selected from a VariableSelectorWidget
SingleVariableWidget	org.rosuda.deducer.widgets.SingleVariableWidget	A list of a single variable selected from a VariableSelectorWidget
ButtonGroupWidget	org.rosuda.deducer.widgets.ButtonGroupWidget	A group of radio buttons
CheckBoxesWidget	org.rosuda.deducer.widgets.CheckBoxesWidget	A group of check boxes
SliderWidget	org.rosuda.deducer.widgets.SliderWidget	A slider
TextAreaWidget	org.rosuda.deducer.widgets.TextAreaWidget	An area to input text
TextFieldWidget	org.rosuda.deducer.widgets.TextFieldWidget	An integer, numeric, or text field
ListWidget	org.rosuda.deducer.widgets.ListWidget	A list of items
ComboBoxWidget	org.rosuda.deducer.widgets.ComboBoxWidget	A combo box
ObjectChooserWidget	org.rosuda.deducer.widgets.ObjectChooserWidget	Select an object from the workspace, possibly of a specific class
JLabel	javax.swing.JLabel	A text label

- dodanie własnego GUI
- dowolny zestaw narzędzi, preferowane Java Swing
- tworzenie GUI z poziomu R lub bezpośrednio w Javie

Podsumowanie

Zalety

przyspieszenie analiz

umożliwienie analiz w R
dla szerszego grona osób

możliwość dodania własnych
funkcji

jeden z najlepszych pakietów
tego typu

Wady

złożone dependencje

ograniczone funkcjonalności

Bibliografia

Fellows Ian (2012). "Deducer: A Data Analysis GUI for R." *Journal of Statistical Software*, 49(8), 1-15. <http://www.jstatsoft.org/v49/i08/>

<https://www.deducer.org/>

<https://cran.r-project.org/web/packages/Deducer/Deducer.pdf>

<https://www.youtube.com/watch?v=iZ857h2j6wA>