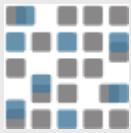




> An Introduction to R

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What is R?

- A suite of operators for calculations on arrays, in particular matrices,
- A large, coherent, integrated collection of intermediate tools for data analysis,
- Graphical facilities for data analysis and display either on-screen or on hardcopy, and
- A well-developed, simple and effective programming language which includes conditionals, loops, user-defined recursive functions and input and output facilities.
- Free (as in beer *and* speech), open-source software

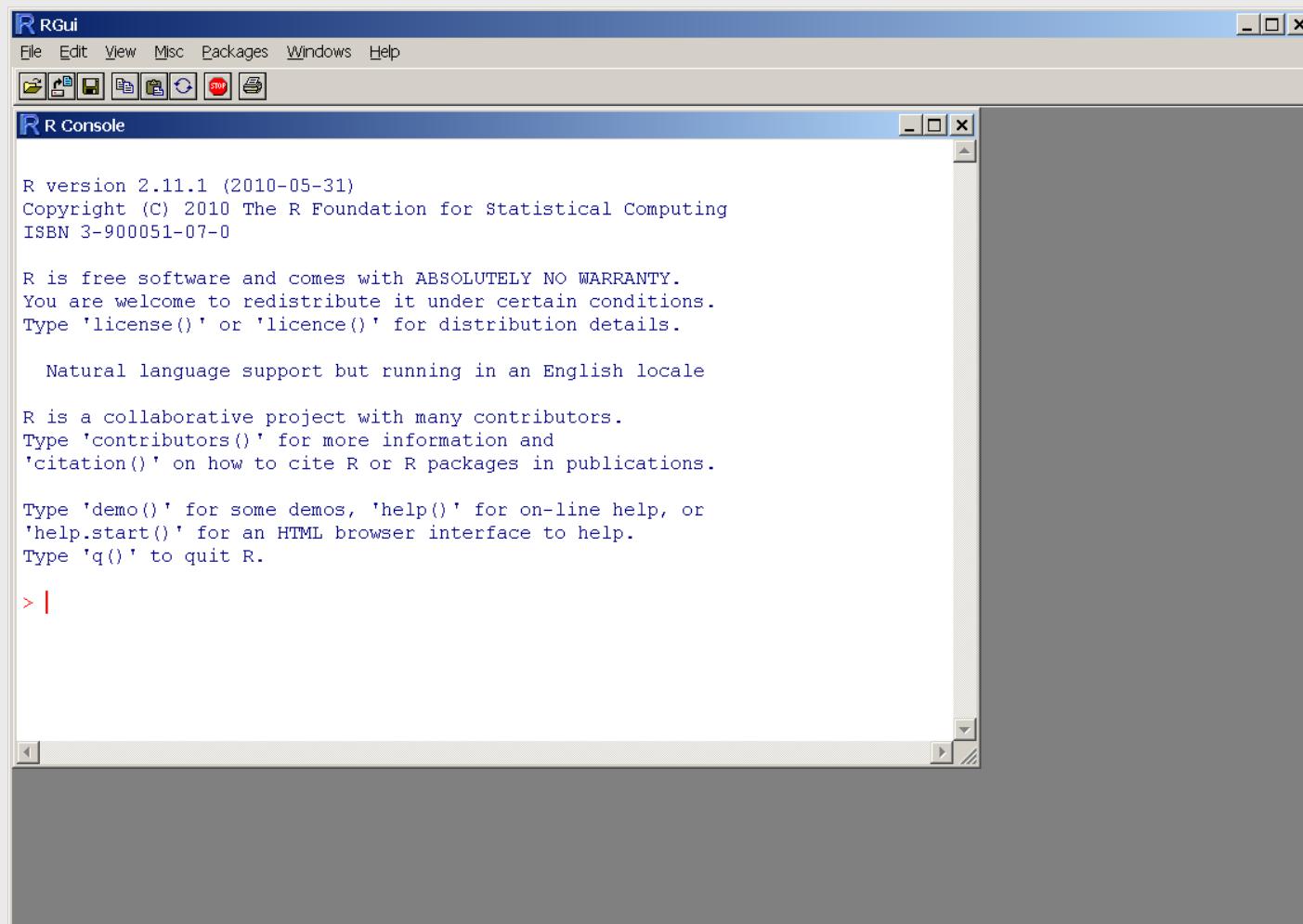


Installing, Running, and Interacting with R

- How to get R:
 - <http://www.r-project.org/>
 - Google: “R”
 - Windows, Linux, Mac OS X, source
 - On mindhive:
 - user@ba1:~\$> R [terminal only]
 - user@ba1:~\$> R -g Tk & [application window]
- Files for this tutorial:
 - http://web.mit.edu/tkp/www/R/R_Tutorial_Data.txt
 - http://web.mit.edu/tkp/www/R/R_Tutorial_Inputs.txt



Installing, Running, and Interacting with R





Installing, Running, and Interacting with R

- All examples are in file “R_Tutorial_Inputs.txt”
- Entering data
 - Math
 - Variables
 - Arrays
 - Math on arrays
 - Functions
- Getting help
- Reading data from files
- Selecting subsets of data



Installing, Running, and Interacting with R

Math:

```
> 1 + 1  
[1] 2  
  
> 1 + 1 * 7  
[1] 8  
  
> (1 + 1) * 7  
[1] 14
```

Variables:

```
> x <- 1  
> x  
[1] 1  
> y = 2  
> y  
[1] 2  
> z -> z  
> z  
[1] 3  
> (x + y) * z  
[1] 9
```



Installing, Running, and Interacting with R

Arrays:

```
> x <- c(0,1,2,3,4)
> x
[1] 0 1 2 3 4

> y <- 1:5
> y
[1] 1 2 3 4 5

> z <- 1:50
> z
 [1]  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15
[16] 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
[31] 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45
[46] 46 47 48 49 50
```



Installing, Running, and Interacting with R

Math on arrays:

```
> x <- c(0,1,2,3,4)
> y <- 1:5
> z <- 1:50
> x + y
[1] 1 3 5 7 9
> x * y
[1] 0  2  6 12 20
> x * z
 [1]   0    2    6   12   20    0    7   16   27   40    0
[12]  12   26   42   60    0   17   36   57   80    0   22
[23]  46   72  100    0   27   56   87  120    0   32   66
[34] 102  140    0   37   76  117  160    0   42   86  132
[45] 180    0   47   96  147  200
```

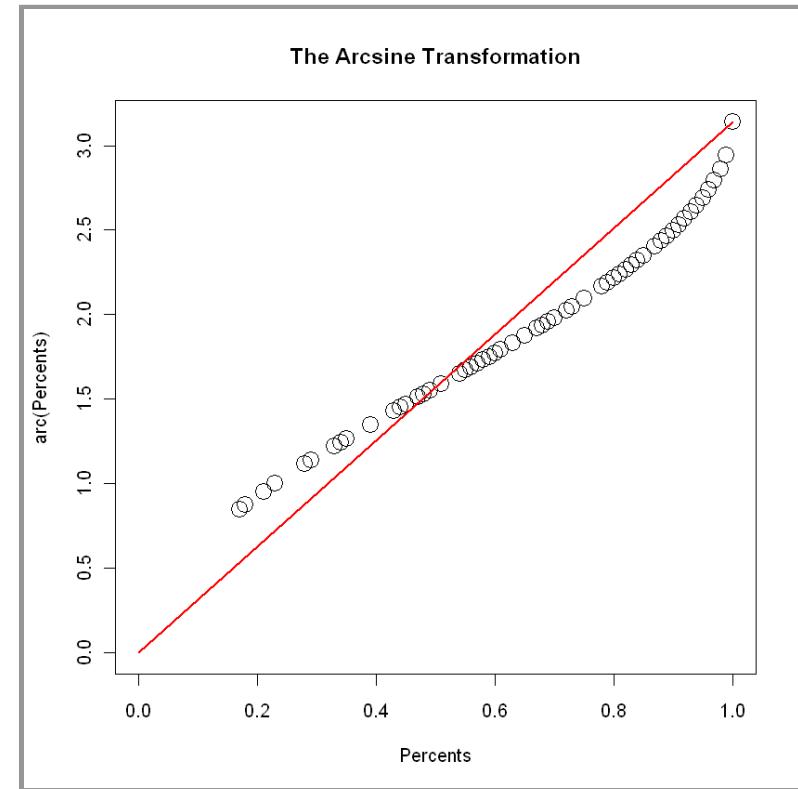


Installing, Running, and Interacting with R

Functions:

```
> arc <- function(x) 2*asin(sqrt(x))  
> arc(0.5)  
[1] 1.570796  
> x <- c(0,1,2,3,4)  
> x <- x / 10  
> arc(x)  
[1] 0.0000000 0.6435011 0.9272952  
[4] 1.1592795 1.3694384
```

```
> plot(arc(Percents)~Percents,  
+ pch=21,cex=2,xlim=c(0,1),ylim=c(0,pi),  
+ main="The Arcsine Transformation")  
> lines(c(0,1),c(0,pi),col="red",lwd=2)
```





Installing, Running, and Interacting with R

Getting help:

```
> help(t.test)
> help.search("standard deviation")
```

R: Student's t-Test - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://127.0.0.1:19773/library/stats/html/t.test.html

R: Student's t-Test

t.test {stats}

R Documentation

Student's t-Test

Description

Performs one and two sample t-tests on vectors of data.

Usage

t.test(x, ...)

Default S3 method:
t.test(x, y = NULL,
 alternative = c("two.sided", "less", "greater"),
 mu = 0, paired = FALSE, var.equal = FALSE,
 conf.level = 0.95, ...)

S3 method for class 'formula':
t.test(formula, data, subset, na.action, ...)

Arguments

x a (non-empty) numeric vector of data values.
y an optional (non-empty) numeric vector of data values.
alternative a character string specifying the alternative hypothesis, must be one of "two.sided" (default), "greater" or "less". You can specify just the initial letter.
mu a number indicating the true value of the mean (or difference in

Done

R Gui

R Console

R version 2.11.1 (2010-05-31)
Copyright (C) 2010 The R Foundation for Statistical Computing
ISBN 3-900051-07-0

R is free software.
You are welcome to redistribute it under certain conditions.
Type 'license' for information.

R is a collaborative project with many contributors.
Type 'contributors' for more information.
Type 'citation()' for further reference.

nlme::pooledSD Extract Pooled Standard Deviation
stats::sd Standard Deviation

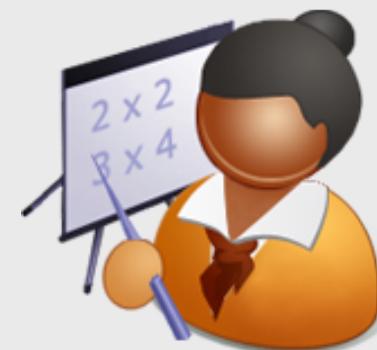
Type '?PKG::FOO' to inspect entry 'PKG::FOO TITLE'.

> help.search
> |



Installing, Running, and Interacting with R

- Example experiment:
 - Subjects learning to perform a new task:
 - Two groups of subjects
 - (“A” and “B”; high and low aptitude learners)
 - Two types of training paradigm
 - (“High variability” and “Low variability”)
 - Four pre-training assessment tests
- Example data in “R_Tutorial_Data.txt”





Installing, Running, and Interacting with R

Reading data from files:

```
> myData <- read.table("R_Tutorial_Data.txt",
+ header=TRUE, sep="\t")
> myData
  Condition Group Prel Pre2 Pre3 Pre4 Learning
1       Low     A  0.77  0.91  0.24  0.72      0.90
2       Low     A  0.82  0.91  0.62  0.90      0.87
3       Low     A  0.81  0.70  0.43  0.46      0.90
. . .
61      High    B  0.44  0.41  0.84  0.82      0.29
62      High    B  0.48  0.56  0.83  0.85      0.48
63      High    B  0.61  0.82  0.88  0.95      0.28
```

R Tutorial Data.txt - OpenOffice.org Calc

	A	B	C	D	E	F	G	H
1	Condition	Group	Prel	Pre2	Pre3	Pre4	Learning	Gender
2	Low	A	0.77	0.91	0.24	0.72	0.90	M
3	Low	A	0.82	0.91	0.62	0.9	0.87	F
4	Low	A	0.81	0.7	0.43	0.46	0.9	F
5	Low	A	0.88	0.89	0.2	0.63	0.85	M
6	Low	A	0.78	0.68	0.25	0.73	0.93	F
7	Low	A	0.74	0.9	0.99	0.99	0.93	M
8	Low	A	0.78	0.86	0.79	0.78	0.89	F
9	Low	A	0.76	0.76	0.61	0.85	0.8	F
10	Low	A	0.93	0.82	0.99	0.99	0.98	M

R Tutorial Data.txt - Notepad

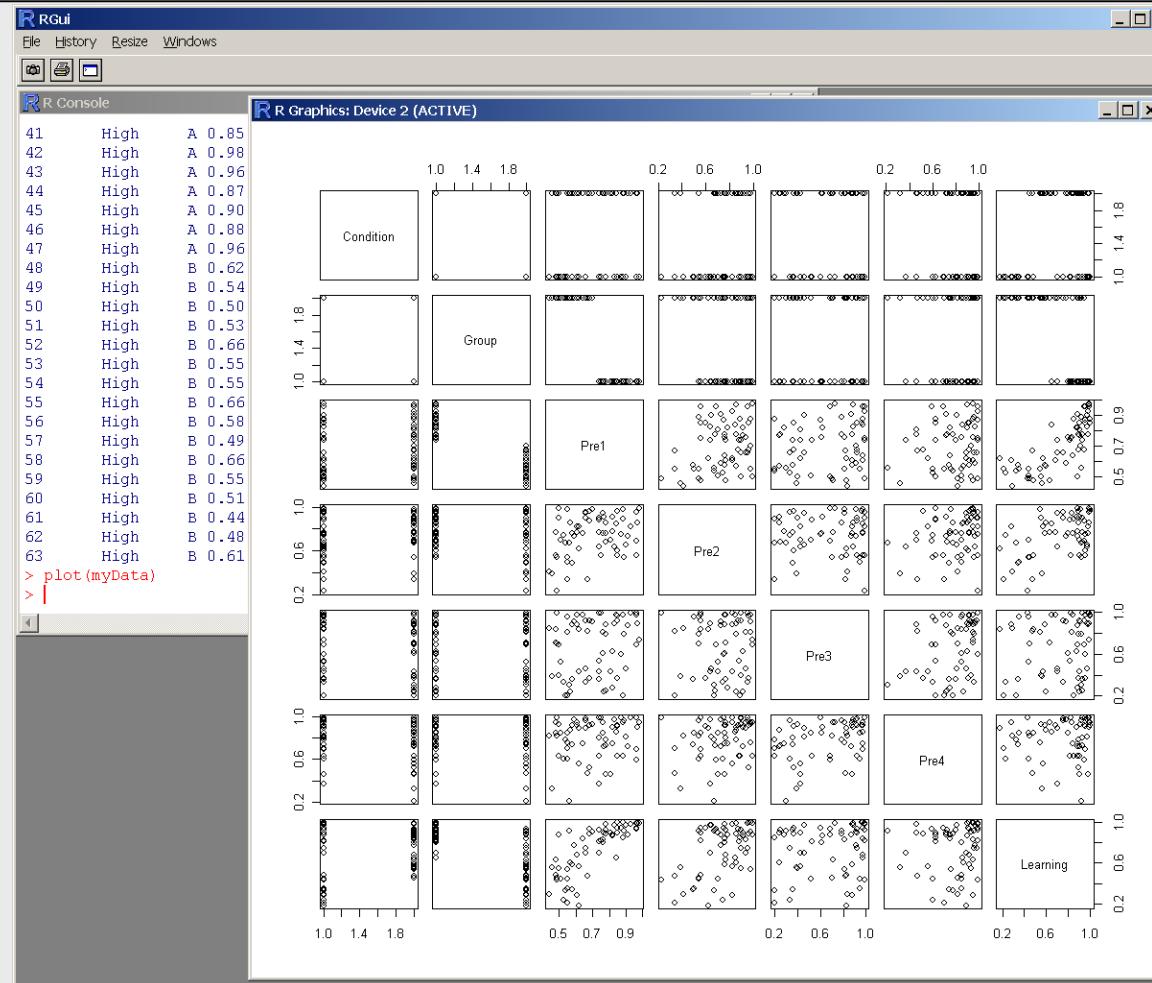
Condition	Group	Prel	Pre2	Pre3	Pre4
Low	A	0.77	0.91	0.24	0.72
Low	A	0.82	0.91	0.62	0.9
Low	A	0.81	0.7	0.43	0.46
Low	A	0.88	0.89	0.2	0.63
Low	A	0.78	0.68	0.25	0.73
Low	A	0.74	0.9	0.99	0.99
Low	A	0.78	0.86	0.79	0.78
Low	A	0.76	0.76	0.61	0.85
Low	A	0.93	0.82	0.99	0.99
Low	A	0.82	0.78	0.28	0.75
Low	A	0.91	0.73	0.87	0.72
Low	A	0.96	0.69	0.69	0.59
Low	A	0.97	0.86	0.89	0.9
Low	A	0.89	0.54	0.79	0.96
Low	A	0.76	0.94	0.81	0.95
Low	A	0.84	0.85	0.97	0.86
Low	B	0.62	0.82	0.43	0.56



Installing, Running, and Interacting with R

Examining datasets:

```
> plot(myData)
```





Installing, Running, and Interacting with R

Selecting subsets of data:

```
> myData$Learning
[1] 0.90 0.87 0.90 0.85 0.93 0.93 0.89 0.80 0.98
[10] 0.88 0.88 0.94 0.99 0.92 0.83 0.65 0.57 0.55
[19] 0.94 0.68 0.89 0.60 0.63 0.84 0.92 0.56 0.78
[28] 0.54 0.47 0.45 0.59 0.91 0.98 0.82 0.93 0.81
[37] 0.97 0.95 0.70 1.00 0.90 0.99 0.95 0.95 0.97
[46] 1.00 0.99 0.18 0.33 0.88 0.23 0.75 0.21 0.35
[55] 0.70 0.34 0.43 0.75 0.44 0.44 0.29 0.48 0.28
> myData$Learning [myData$Group=="A"]
[1] 0.90 0.87 0.90 0.85 0.93 0.93 0.89 0.80 0.98
[10] 0.88 0.88 0.94 0.99 0.92 0.83 0.65 0.98 0.82
[19] 0.93 0.81 0.97 0.95 0.70 1.00 0.90 0.99 0.95
[28] 0.95 0.97 1.00 0.99
```



Installing, Running, and Interacting with R

Selecting subsets of data:

```
> myData$Learning
[1] 0.90 0.87 0.90 0.85 0.93 0.93 0.89 0.80 0.98
[10] 0.88 0.88 0.94 0.99 0.92 0.83 0.65 0.57 0.55
[19] 0.94 0.68 0.89 0.60 0.63 0.84 0.92 0.56 0.78
[28] 0.54 0.47 0.45 0.59 0.91 0.98 0.82 0.93 0.81
[37] 0.97 0.95 0.70 1.00 0.90 0.99 0.95 0.95 0.97
[46] 1.00 0.99 0.18 0.33 0.88 0.23 0.75 0.21 0.35
[55] 0.70 0.34 0.43 0.75 0.44 0.44 0.29 0.48 0.28
> attach(myData)
> Learning
[1] 0.90 0.87 0.90 0.85 0.93 0.93 0.89 0.80 0.98
[10] 0.88 0.88 0.94 0.99 0.92 0.83 0.65 0.57 0.55
[19] 0.94 0.68 0.89 0.60 0.63 0.84 0.92 0.56 0.78
[28] 0.54 0.47 0.45 0.59 0.91 0.98 0.82 0.93 0.81
[37] 0.97 0.95 0.70 1.00 0.90 0.99 0.95 0.95 0.97
[46] 1.00 0.99 0.18 0.33 0.88 0.23 0.75 0.21 0.35
[55] 0.70 0.34 0.43 0.75 0.44 0.44 0.29 0.48 0.28
```



Installing, Running, and Interacting with R

Selecting subsets of data:

```
> Learning[Group=="A"]
[1] 0.90 0.87 0.90 0.85 0.93 0.93 0.89 0.80 0.98
[10] 0.88 0.88 0.94 0.99 0.92 0.83 0.65 0.98 0.82
[19] 0.93 0.81 0.97 0.95 0.70 1.00 0.90 0.99 0.95
[28] 0.95 0.97 1.00 0.99
> Learning[Group!="A"]
[1] 0.57 0.55 0.94 0.68 0.89 0.60 0.63 0.84 0.92
[10] 0.56 0.78 0.54 0.47 0.45 0.59 0.91 0.18 0.33
[19] 0.88 0.23 0.75 0.21 0.35 0.70 0.34 0.43 0.75
[28] 0.44 0.44 0.29 0.48 0.28
> Condition[Group=="B"&Learning<0.5]
[1] Low Low High High High High High High High
[10] High High High High High
Levels: High Low
```



Statistics and Data Analysis

- Parametric Tests
 - Independent sample t-tests
 - Paired sample t-tests
 - One sample t-tests
 - Correlation
- Nonparametric tests
 - Shapiro-Wilks test for normality
 - Wilcoxon signed-rank test (Mann-Whitney U)
 - Chi square test
- Linear Models and ANOVA



Basic parametric inferential statistics

Independent sample t-tests:

```
> t.test(Pre2[Group=="A"],  
+ Pre2[Group=="B"],  
+ paired=FALSE)
```

Welch Two Sample t-test

```
data: Learning[Group == "A"] and Learning[Group == "B"]  
t = 1.6117, df = 53.275, p-value = 0.1129  
alternative hypothesis: true difference in means is not equal to 0  
95 percent confidence interval:  
-0.0179193 0.1645725  
sample estimates:  
mean of x mean of y  
0.7764516 0.7031250
```



Basic parametric inferential statistics

Independent sample t-tests:

```
> t.test(Pre2[Group=="A"],  
+ Pre2[Group=="B"],  
+ paired=FALSE,  
+ var.equal=TRUE)
```

Welch Two Sample t-test

```
data: Learning[Group == "A"] and Learning[Group == "B"]
```

```
t = 1.601, df = 61, p-value = 0.1145
```

```
alternative hypothesis: true difference in means is not equal to 0
```

```
95 percent confidence interval:
```

```
-0.0179193 0.1645725
```

```
sample estimates:
```

```
mean of x mean of y
```

```
0.7764516 0.7031250
```



Basic parametric inferential statistics

Independent sample t-tests:

```
> t.test(Pre2[Group=="A"],  
+ Pre2[Group=="B"],  
+ paired=FALSE,  
+ var.equal=TRUE,  
+ alternative="greater")
```

Welch Two Sample t-test

```
data: Learning[Group == "A"] and Learning[Group == "B"]  
t = 1.601, df = 61, p-value = 0.5727  
alternative hypothesis: true difference in means is greater than 0  
95 percent confidence interval:  
-0.003169388 Inf  
sample estimates:  
mean of x mean of y  
0.7764516 0.7031250
```



Basic parametric inferential statistics

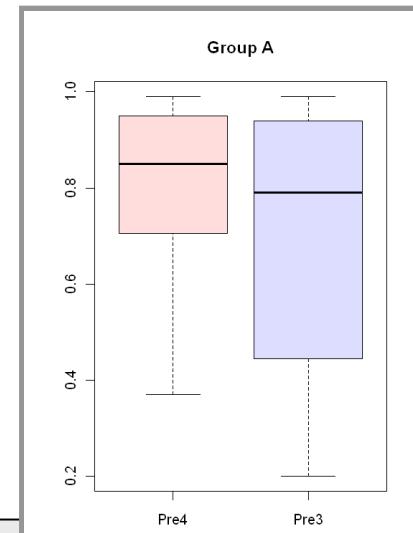
Paired sample t-test:

```
> t.test(Pre4[Group=="A"],  
+ Pre3[Group=="A"],  
+ paired=TRUE)
```

Paired t-test

```
data: Pre4[Group == "A"] and Pre3[Group == "A"]  
t = 2.4054, df = 30, p-value = 0.02253  
alternative hypothesis: true difference in means is not equal to 0  
95 percent confidence interval:  
 0.01641059 0.20100876  
sample estimates:  
mean of the differences  
 0.1087097
```

```
> boxplot(Pre4[Group=="A"],  
+ Pre3[Group=="A"],  
+ col=c("#ffdddd", "#dddfef"),  
+ names=c("Pre4", "Pre3"), main="Group A")
```





Basic parametric inferential statistics

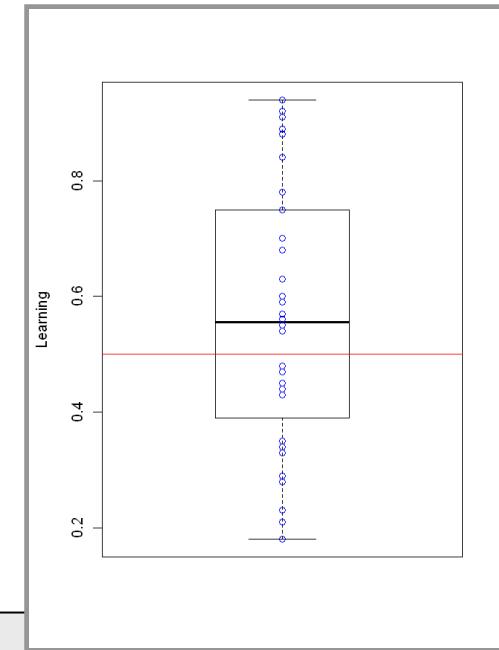
One sample t-test:

```
> t.test(Learning[Group=="B"], mu=0.5, alternative="greater")
```

```
One Sample t-test
```

```
data: Learning[Group == "B"]
t = 1.5595, df = 31, p-value = 0.06452
alternative hypothesis: true mean is greater than 0.5
95 percent confidence interval:
 0.4945469      Inf
sample estimates:
mean of x
 0.5625
```

```
> boxplot(Learning[Group=="B"],
+ names="Group B", ylab="Learning")
> lines(c(0,2), c(0.5, 0.5), col="red")
> points(c(rep(1,length(Learning[Group=="B"])))), 
+ Learning[Group=="B"], pch=21, col="blue")
```





Basic parametric inferential statistics

Correlation:

```
> cor.test(Pre1, Learning, method="pearson")
```

Pearson's product-moment correlation

data: Pre1 and Learning

t = 9.2461, df = 61, p-value = 3.275e-13

alternative hypothesis: true correlation is not equal to 0

95 percent confidence interval:

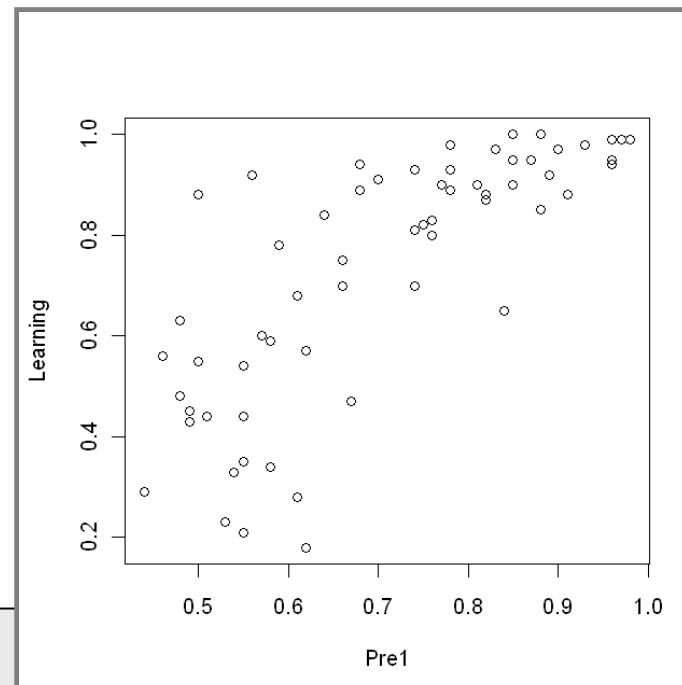
0.6366698 0.8506815

sample estimates:

cor

0.7639292

```
> plot(Pre1, Learning)
```





Basic parametric inferential statistics

Correlation (fancier plot example):

```
> cor.test(Pre1, Learning, method="pearson")
```

Pearson's product-moment correlation

data: Pre1 and Learning

t = 9.2461, df = 61, p-value = 3.275e-13

alternative hypothesis: true correlation is not equal to 0

95 percent confidence interval:

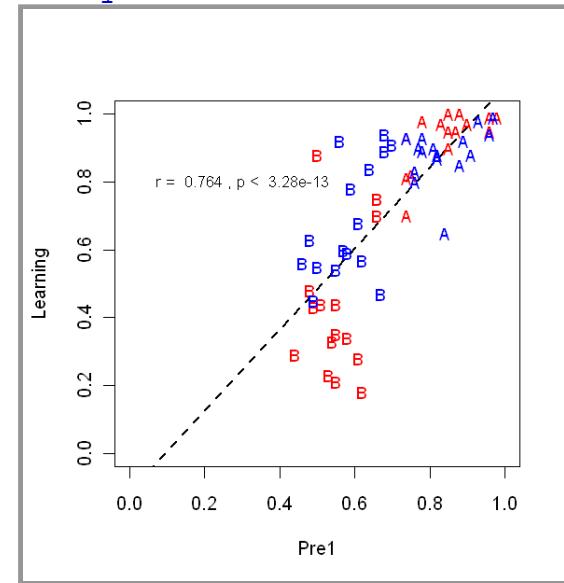
0.6366698 0.8506815

sample estimates:

COR

0.7639292

```
> plot(Learning~Pre1, ylim=c(0,1), xlim=c(0,1), ylab="Learning", xlab="Pre1", type="n")
> abline(lm(Learning~Pre1), col="black", lty=2, lwd=2)
> points(Learning[Group=="A"&Condition=="High"]~Pre1[Group=="A"&Condition=="High"],
+ pch=65, col="red", cex=0.9)
> points(Learning[Group=="A"&Condition=="Low"]~Pre1[Group=="A"&Condition=="Low"],
+ pch=65, col="blue", cex=0.9)
> points(Learning[Group=="B"&Condition=="High"]~Pre1[Group=="B"&Condition=="High"],
+ pch=66, col="red", cex=0.9)
> points(Learning[Group=="B"&Condition=="Low"]~Pre1[Group=="B"&Condition=="Low"],
+ pch=66, col="blue", cex=0.9)
> legend(2.5,1.0, c("LV Training", "HV Training"), pch=c(19), col=c("blue", "red"), bty="y")
> yCor <- cor.test(Pre1, Learning, method="pearson")
> text(0.3,0.8, paste("r = ", format(myCor$estimate,digits=3),", p < ", format(myCor$p.value,digits=3)), cex=0.8)
```





Statistics and Data Analysis

Are my data normally distributed?

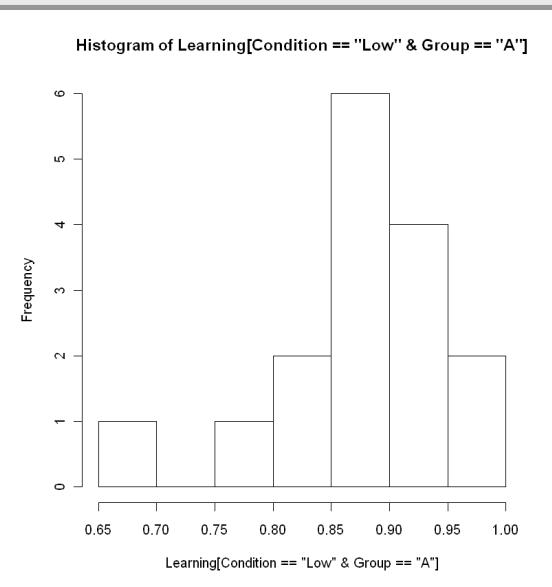
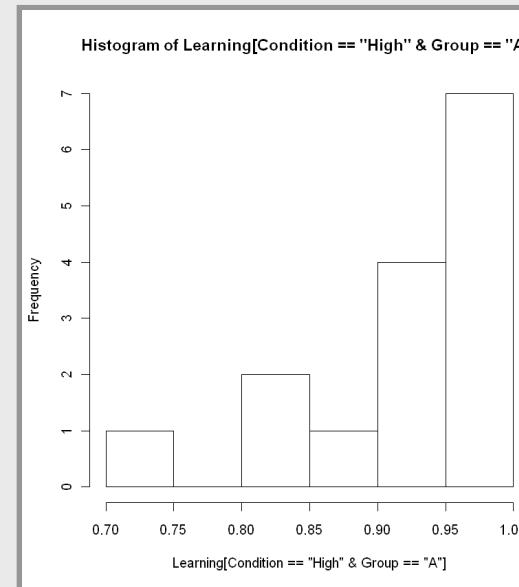
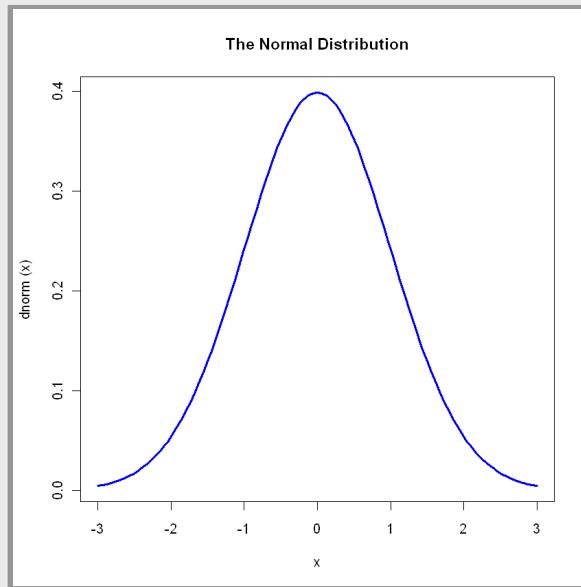
```
> t.test(Learning[Condition=="High"&Group=="A"] ,  
+ Learning[Condition=="Low"&Group=="A"] )  
  
Welch Two Sample t-test  
  
data: Learning[Condition == "High" & Group == "A"] and  
Learning[Condition == "Low" & Group == "A"]  
t = 1.457, df = 28.422, p-value = 0.1561  
alternative hypothesis: true difference in means is not equal to 0  
95 percent confidence interval:  
-0.01764821 0.10481488  
sample estimates:  
mean of x mean of y  
0.9273333 0.8837500
```



Statistics and Data Analysis

Are my data normally distributed?

```
> plot(dnorm,-3,3,col="blue",lwd=3,main="The Normal Distribution")
> par(mfrow=c(1,2))
> hist(Learning[Condition=="High"&Group=="A"])
> hist(Learning[Condition=="Low"&Group=="A"])
```





Statistics and Data Analysis

Are my data normally distributed?

```
> shapiro.test(Learning[Condition=="High"&Group=="A"])
```

```
Shapiro-Wilk normality test
```

```
data: Learning[Condition == "High" & Group == "A"]
W = 0.7858, p-value = 0.002431
```

```
> shapiro.test(Learning[Condition=="Low"&Group=="A"])
```

```
Shapiro-Wilk normality test
```

```
data: Learning[Condition == "Low" & Group == "A"]
W = 0.8689, p-value = 0.02614
```



Basic nonparametric inferential statistics

Wilcoxon signed-rank / Mann-Whitney U tests:

```
> wilcox.test(Learning[Condition=="High"&Group=="A"] ,  
+ Learning[Condition=="Low"&Group=="A"] ,  
+ exact=FALSE ,  
+ paired=FALSE)  
  
Wilcoxon rank sum test with continuity correction  
  
data: Learning[Condition == "High" & Group == "A"] and  
    Learning[Condition == "Low" & Group == "A"]  
W = 173.5, p-value = 0.03580  
alternative hypothesis: true location shift is not equal to 0
```



Basic nonparametric inferential statistics

Chi square test:

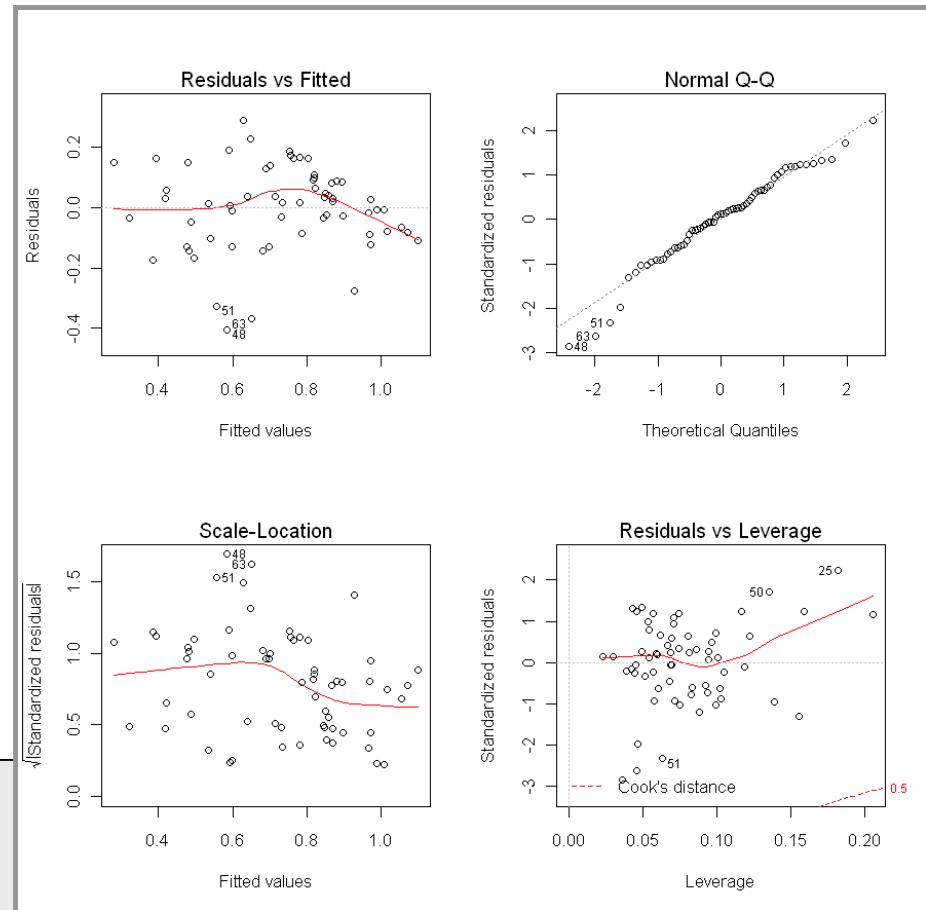
```
> x <- matrix(c(  
+ length(Learning[Group=="A"&Condition=="High"&Gender=="F"]) ,  
+ length(Learning[Group=="A"&Condition=="Low"&Gender=="F"] ) ,  
+ length(Learning[Group=="B"&Condition=="High"&Gender=="F"] ) ,  
+ length(Learning[Group=="B"&Condition=="Low"&Gender=="F"] ) ) ,  
+ ncol=2)  
> x  
      [,1] [,2]  
[1,]     4    12  
[2,]    10     7  
> chisq.test(x)  
  
Pearson's Chi-squared test with Yates' continuity correction  
  
data: x  
X-squared = 2.5999, df = 1, p-value = 0.1069
```



Linear models and ANOVA

Linear models:

```
> myModel <- lm(Learning ~ Pre1 + Pre2 + Pre3 + Pre4)  
> par(mfrow=c(2,2))  
> plot(myModel)
```





Linear models and ANOVA

Linear models:

```
> summary(myModel)
```

Call:

```
lm(formula = Learning ~ Pre1 + Pre2 + Pre3 + Pre4)
```

Residuals:

Min	1Q	Median	3Q	Max
-0.40518	-0.08460	0.01707	0.09170	0.29074

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	-0.22037	0.11536	-1.910	0.061055 .
Pre1	1.05299	0.12636	8.333	1.70e-11 ***
Pre2	0.41298	0.10926	3.780	0.000373 ***
Pre3	0.07339	0.07653	0.959	0.341541
Pre4	-0.18457	0.11318	-1.631	0.108369

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.1447 on 58 degrees of freedom

Multiple R-squared: 0.6677, Adjusted R-squared: 0.6448

F-statistic: 29.14 on 4 and 58 DF, p-value: 2.710e-13



Linear models and ANOVA

Linear models:

```
> step(myModel, direction="backward")
Start: AIC=-238.8
Learning ~ Pre1 + Pre2 + Pre3 + Pre4
```

	Df	Sum of Sq	RSS	AIC
- Pre3	1	0.01925	1.2332	-239.81
<none>			1.2140	-238.80
- Pre4	1	0.05566	1.2696	-237.98
- Pre2	1	0.29902	1.5130	-226.93
- Pre1	1	1.45347	2.6675	-191.21

```
Step: AIC=-239.81
Learning ~ Pre1 + Pre2 + Pre4
```

	Df	Sum of Sq	RSS	AIC
- Pre4	1	0.03810	1.2713	-239.89
<none>			1.2332	-239.81
- Pre2	1	0.28225	1.5155	-228.83
- Pre1	1	1.54780	2.7810	-190.58

...

...

```
Step: AIC=-239.89
Learning ~ Pre1 + Pre2
```

	Df	Sum of Sq	RSS	AIC
<none>			1.2713	-239.89
- Pre2	1	0.24997	1.5213	-230.59
- Pre1	1	1.52516	2.7965	-192.23

Call:

```
lm(formula = Learning ~ Pre1 + Pre2)
```

Coefficients:

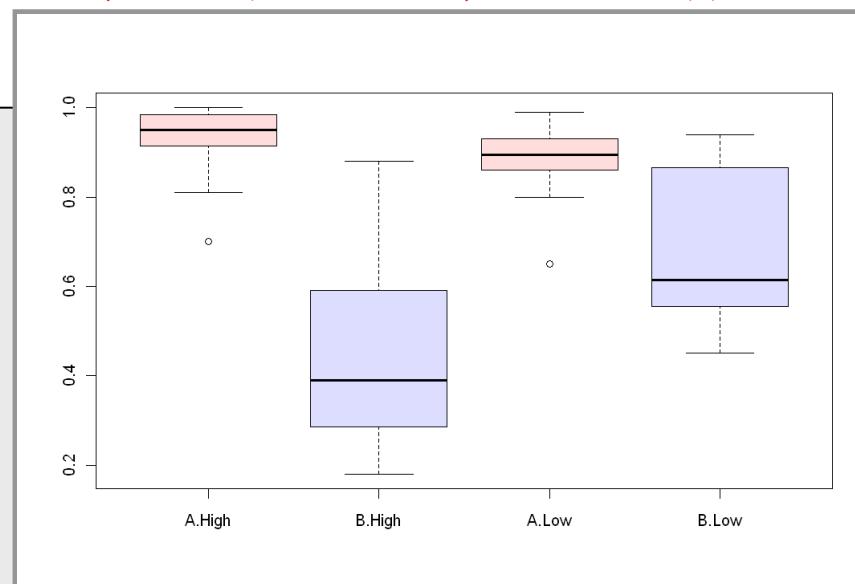
(Intercept)	Pre1	Pre2
-0.2864	1.0629	0.3627



Linear models and ANOVA

ANOVA:

```
> myANOVA <- aov(Learning~Group*Condition)
> summary(myANOVA)
      Df Sum Sq Mean Sq F value    Pr(>F)
Group          1 1.8454 1.84537 81.7106 9.822e-13 ***
Condition       1 0.1591 0.15910  7.0448 0.0102017 *
Group:Condition 1 0.3164 0.31640 14.0100 0.0004144 ***
Residuals      59 1.3325 0.02258
---
Signif. codes:  0 '****' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
> boxplot(Learning~Group*Condition,col=c("#ffdddd","#ddffff"))
```





Linear models and ANOVA

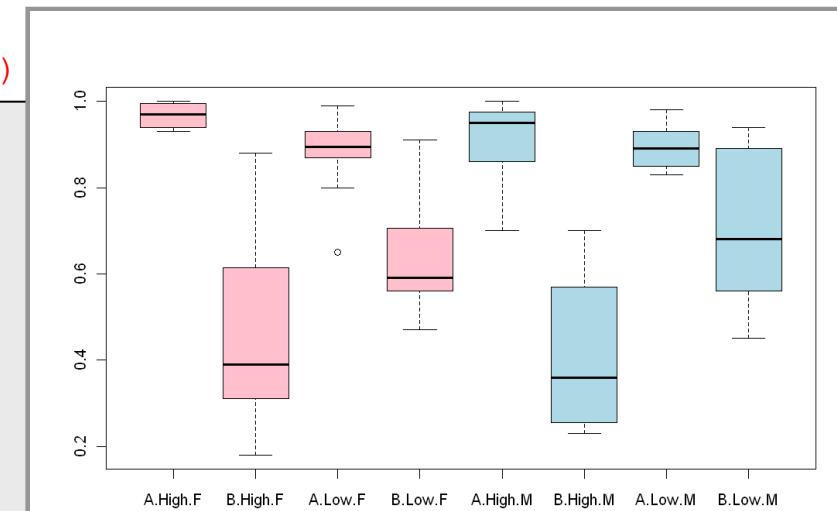
ANOVA:

```
> myANOVA2 <- aov(Learning~Group*Condition+Gender)
> summary(myANOVA2)

      Df  Sum Sq Mean Sq F value    Pr(>F)
Group        1 1.84537 1.84537 80.3440 1.523e-12 ***
Condition     1 0.15910 0.15910  6.9270  0.010861 *
Gender        1 0.04292 0.04292  1.8688  0.176886
Group:Condition 1 0.27378 0.27378 11.9201  0.001043 **
Residuals    58 1.33216 0.02297

---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

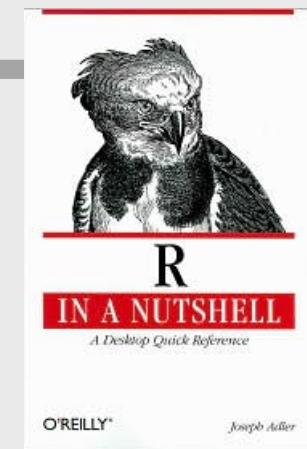
> boxplot(Learning~Group*Condition+Gender,
+ col=c(rep("pink",4),rep("light blue",4)))
```





How to find R help and resources on the internet

- R wiki:
<http://rwiki.sciviews.org/doku.php>
- R graph gallery:
<http://addictedtor.free.fr/graphiques/thumbs.php>
- Kickstarting R:
<http://cran.r-project.org/doc/contrib/Lemon-kickstart/>



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Google Everything More Show search tools

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About 2,740,000 results (0.24 seconds) II

R Plot Residuals
plot.residuals [multit], R Documentation. Plot Residuals. Description. plot.residuals is used for plotting residuals from models obtained from dynamic ...
rss.acs.unt.edu/Rdoc/library/multit/html/plot.residuals.html - Cached

R Residual plot for lm or nls objects.
Constructs a residual plot for lm or nls objects. Different symbols for different groups can be added to the plot if an indicator variable regression is ...
www.Rforge.net/doc/packages/NCStats/residual.plot.html - Cached - Similar

R Residuals from a Logistic Regression Model Fit
The plot.lm partial function computes partial residuals for a series of binary ... Under R, plot.lm "uses loess" uses loess and does not provide confidence bands ...
lib.stat.cmu.edu/S/Harrell/help/Design.../residuals.lm.html - Cached - Similar

R help archive: [R] plotting residuals
Nov 4, 2006 ... [R] plotting residuals. This message : [Message body] [More options ...
Does anyone know how to obtain a plot of residuals by predicted ...
tolstoy.newcastle.edu.au/R/e2/help/06/11/4466.html - Cached - Similar

ipaq Plots of Residuals
File Format: Microsoft Word - [View as HTML](#).
Notice that the R has gone up a lot in now significant, and the residuals plot looks fine.
Let us have a look at the regression line. ...
core.ecu.edu/psyc/wuenschk/spss/Residual-Plots-SPSS.doc

ipaq R FUNCTIONS FOR REGRESSION ANALYSIS
File Format: PDF/Adobe Acrobat - [Quick View](#)
Oct 14, 2005 ... qqnorm.gls: Normal Plot of Residuals from a gls Object (nlme) rsq.part: Plots the Approximate R-Square for the Different Splits (part ...
cran.r-project.org/doc/contrib/Ricci-refcard-regression.pdf - Similar

Normal Probability Plot of Residuals | R Tutorial
Jan 4, 2010 ... An R tutorial on the normal probability plot for the residual of a simple linear

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The ipairs function produces an image scatter plot matrix of large datasets where the colors encode[...]

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