
R-Funktionen

Das Verzeichnis zu häufig verwendeten R-Funktionen bezieht sich auf die Anwendung in zahlreichen Beispielen zur Angewandten Statistik. Die entsprechenden Befehle stehen als Skripte auch im Internet unter <http://www.j-hedderich.de/> zur Verfügung. Ein schneller Einstieg für Anwender des R-Programms ist auch über **Quick-R** unter (<https://www.statmethods.net/>) möglich.

A

abline()	963
acf()	129
ad.test() in <i>library(nortest)</i>	499
addmargins()	945
anova() zu glm()	854, 856, 876
anova() zu lm()	844, 847, 849
ansari.test()	540, 544, 546
any()	950
aov()	630, 631, 649, 664, 680, 686, 693, 844, 884, 896, 957
apply()	950, 954
approx()	314
as.character()	942
as.date() in <i>library(date)</i>	942
asin()	239
asymptotic_test2()	539
<i>in library(cvequality)</i>	539
attach()	947

B

barplot()	76, 961
barplot2() in <i>library(gplots)</i>	76
bartlett.test()	623, 624
binom.confint()	730
binom.test()	506, 507
boot.ci() in <i>library(boot)</i>	779
bootstrap() in <i>library(bootstrap)</i>	404
boott() in <i>library(bootstrap)</i>	404
bowker.test()	770
boxcox() in <i>library(MASS)</i>	489
boxplot()	86, 395, 396, 501, 961
bradley.blackwood.test()	432
break	953
breslow.day.test()	735
by()	886, 955

C

c()	941, 943
-----	----------

cbind()	941, 944
ceiling()	43, 956
chisq.tab()	874
chisq.test()	702, 741, 758
choose()	63, 65, 173, 252
chow.test()	807
ci_median()	393
ciconcord()	434
CImultinom()	372
ckappa() in <i>library(psy)</i>	779
cluster.sampling()	893
colSums()	758, 945
combn()	63
complete.cases()	950
concordance() zu coxph() in <i>library(survival)</i>	932
confint()	
zu glht() in <i>library(multcomp)</i>	637, 641
confint() zu Kappa()	779
contr.sum()	843
contr.treatment()	842
contrMat() in <i>library(multcomp)</i>	641
cooks.distanz()	831
cor()	88, 91, 127, 133, 788
cor.test()	88, 788, 795, 802
cos()	956
cox.stuart.test()	528
coxph() in <i>library(survival)</i>	926, 928, 930, 933–935
cph() in <i>library(rms)</i>	929
cumprod()	957
cumsum()	957
cut()	944
cvm_test() in <i>library(twosamples)</i>	596

D

data.frame()	941, 946
dbinom()	233–235, 507

dchisq()	308
ddiscrete() in <i>library(e1071)</i>	229
det()	50
dgumbel()	298
dhyper()	257, 259, 260
DI_test()	249
diag()	946
diagnosis() in <i>library(DiagnosisMed)</i>	195
dimnames()	77, 702
dixon.test() in <i>library(outliers)</i>	504
dmultinom()	241, 242
dnbinom()	252–255
dnorm()	279, 281
dotchart()	961
dpois()	246–249, 253, 255
drop1() zu lm()	837
dt()	305
dtnorm() in <i>library(extraDistr)</i>	352
dwilcox()	570
dwtest()	808
dwtest() in <i>library(lmtest)</i>	809
E	
ecdf()	115
edit()	947
eigen()	53
EMacs, Editor (GUI)	938
ES.chisq.assoc()	
in <i>library(powerAnalysis)</i>	764
ES.h() in <i>library(pwr)</i>	704
exp()	43, 956
F	
factor()	944
fisher.test()	711, 722
fit.contrast() in <i>library(gmodels)</i>	649
fitdist() in <i>library(fitdistrplus)</i>	300, 352
fitdistr() in <i>library(MASS)</i>	352
fitted.values() zu glm()	878
fivenum()	226
fligner.test()	624
floor()	43, 84, 956
for()	953
friedman.test()	668
friedman_test() in <i>library(concord)</i>	675
friedman_test() in <i>library(coin)</i>	672, 675
function()	953
G	
geese() in <i>library(geepack)</i>	901
ginv() in <i>library(MASS)</i>	51
glht() zu aov()	
in <i>library(multcomp)</i>	637, 641, 844
glm()	853, 856, 860, 864, 868, 870, 876, 878, 881, 957
glmmPQL() in <i>library(MASS)</i>	898
grubbs.test() in <i>library(outliers)</i>	504
H	
hatvalues()	831
hecm() in <i>library(car)</i>	834
hdquantile() in <i>library(Hmisc)</i>	399
hist()	115, 281, 596, 961
histbackback() in <i>library(Hmisc)</i>	194
hotelling.test() in <i>library(Hotelling)</i>	560
I	
ICC()	436
icc() in <i>library(irr)</i>	435
if()	953
ifelse()	953
influence() zu glm()	862
influence.measures()	831
interaction.plot()	681
is.matrix()	942
is.na()	949, 950
is.numeric()	942
J	
jonckheere.test()	662
K	
Kappa() in <i>library(vcd)</i>	779, 780
kappam.fleiss() in <i>library(irr)</i>	783
kendall() in <i>library(irr)</i>	785
kripp.alpha in <i>library(irr)</i>	784
kruskal.test()	654
kruskalmc() in <i>library(pgirmess)</i>	656
ks.test()	496, 595
ksmooth()	154, 155
kurtosis() in <i>library(e1071)</i>	221, 224, 226, 485
L	
lapply()	893, 955
legend()	963
lehmacher.test()	771
length()	941
leveneTest() in <i>library(car)</i>	624
library(LearnBayes)	453
lillie.test() in <i>library(nortest)</i>	496
lines()	421, 963
list()	941

lm()	136, 354, 411, 417, 421, 806, 807, 809, 823, 828, 835–837, 839, 841–843, 847, 886, 957
lme() in <i>library(nlme)</i>	889, 896
log()	43, 956
log10()	43, 103, 293
lrm() in <i>library(rms)</i>	858
ls()	942

M

mad()	85, 501
mantelhaen.test()	733
marascuilo.procedur()	744
margin.table()	77
Match() in <i>library(Matching)</i>	864
matrix()	47, 48, 77, 702, 944, 945
max()	956
mceexact() in <i>library(exactLogInTest)</i>	881
mcnemar.test()	728
mdy.date() in <i>library(date)</i>	942
mean()	85, 92, 94, 95, 114, 224, 226, 957
median()	84, 501, 957
MH.test()	733
mh_test() in <i>library(coin)</i>	772
min()	956
mle2() in <i>library(bbmle)</i>	348, 350, 351, 411
mode()	941
momente()	224
mood.test()	545
multinomCI() in <i>library(MultinomCI)</i>	372

N

n_defects()	533
NA	949
na.fail()	949
na.omit()	949, 950
names()	77
nCImultinom()	373
nls()	145, 146, 148, 150, 354
noether() in <i>library(rankFD)</i>	580
nomogram() in <i>library(UncertainInterval)</i>	196
nomogram() in <i>library(rms)</i>	858, 929
Notepad++, Editor	938
npow.chisq()	764
npwr.Utest()	580
npwrANOVA()	633

O

oddsratio() in <i>library(vcd)</i>	711
oneway_test() in	

library(coin)	601, 605, 657, 663
order()	88, 952
outer()	584, 758

P

p.adjust()	616, 765
page.trend.test() in <i>library(crank)</i>	675
pairwise.prop.test()	744
par()	963
pbeta()	266–268
pbinom()	233, 234, 268, 507
pchisq()	308, 309
pdisc() in <i>library(LearnBayes)</i>	446
pdiscrete() in <i>library(e1071)</i>	229
pearson.test() in <i>library(nortest)</i>	493
permn() in <i>library(combinat)</i>	61
pexp()	294
pgumbel()	298
phyper()	257
pie()	76
piechart()	961
plot()	124, 421, 961
plot() zu survfit() in <i>library(survival)</i>	928
plotCI() in <i>library(gplots)</i>	356
pnbinom()	252, 268, 464
pnorm()	273, 274
points()	963
poisson.exact() in <i>library(exactci)</i>	378
poisson.test()	529, 590
polygon()	963
posthoc.quade.test() in <i>library(PMCMR)</i>	677
power.chisq() in <i>library(powerAnalysis)</i>	764
power.prop.test()	509, 703
power.t.test()	517, 556
ppois()	246, 248, 529
predict() zu glm()	858
predict() zu lm()	420–422
print() zu survfit() in <i>library(survival)</i>	909
prod()	40, 61, 957
prop.ref.test()	752
prop.table()	77
prop.trend.test()	750
pt()	305
pwilcox()	570
pwr.2p.test() in <i>library(pwr)</i>	704
pwr.r.test() in <i>library(pwr)</i>	797
pwr.var()	536

Q

qbinom()	233
----------	-----

qbirthday()	182	rhyper()	257
qchisq()	310	rlm() in <i>library(MASS)</i>	143
qdiscrete() in <i>library(e1071)</i>	229	rm()	942
qdunnett()	641	rnbnom()	252
qf()	315, 316, 358	rnorm()	281, 334, 352
qFriedman() in <i>library(SuppDists)</i>	666	ROC() in <i>library(DiagnosisMed)</i>	195
qgumbel()	298	round()	44, 72, 956
qhyper()	257	rowSums()	758
qKendall() in <i>library(SuppDists)</i>	801	rpois()	246
qKruskalWallis() in <i>library(SuppDists)</i>	651	rq() in <i>library(quantreg)</i>	143
qmvnorm() in <i>library(mvtnorm)</i>	645	Rstudio, Editor (GUI)	938
qmvt()	642	rtowSums()	945
qmvt() in <i>library(mvtnorm)</i>	640, 645	runif()	334
qnbinom()	252	runs.test() in <i>library(tseries)</i>	526
qnorm()	279, 280	RWinEdt, Editor	938
qpois()	246		
qqline()	487	S	
qqnorm()	487	sample()	230, 334, 403, 695, 893
qqplot()	487	sapply()	955
qsignrank()	519, 584	scan()	943
qSpearman() in <i>library(SuppDists)</i>	801	scatter.smooth()	934
qt()	305, 306, 383, 513	sd()	95, 114, 957
qtukey()	635, 636	se.contrast() zu aov()	649
quade.test()	677	segments()	807
quantil.hist()	117	seq()	943
quantile()	84, 226, 403, 957	set.seed()	334, 352
qvalue() in <i>library(qvalue)</i> , Bioconductor 617		shapiro.test()	499
qwilcox()	570, 571	sign()	956
		sign_test()	586
		sin()	956
		skewness() in <i>library(e1071)</i>	221, 224, 226, 485
R		solve()	51, 53
range()	957	sort()	82, 951, 957
rank()	82, 88, 133, 951, 957	sqrt()	41, 956
rbind()	941, 944	ss.aipe.cv() in <i>library(MBESS)</i>	408
rbinom()	233	SSasymp() in <i>nls()</i>	146
Remdr, <i>library</i>	939	SSfol() in <i>nls()</i>	147
rdiscrete() in <i>library(e1071)</i>	229	SSlogis() in <i>nls()</i>	146
re.code()	948	SSmicmen() in <i>nls()</i>	148
read.table()	941, 947	step() zu lm()	839
recode() in <i>library(car)</i>	948	stepAIC() zu coxph() in <i>library(MASS)</i>	931
regramm()	153	stepAIC() zu glm() in <i>library(MASS)</i>	860, 879
relevel()	944	str()	942
rep()	943	stripchart()	86
replace()	948	stuart.maxwell.mh() in <i>library(irr)</i>	772
replicate()	695, 955	subset()	951
reshape()	686, 883, 949	sum()	36, 38, 72, 957
resid() zu coxph() in <i>library(survival)</i>	933	summary()	957
resid() zu coxph() in <i>library(survival)</i>	935	summary() zu	
residuals() zu glm()	862, 869		
return()	953		
rgumbel()	298		

aov() 630, 631, 664, 680, 686, 693
 coxph() in *library(survival)* 927
 glm() 853, 856, 868
 lm() 823, 828, 841–843, 847
 survfit() in *library(survival)* 907
 summary() zu lm() 421
 survdiff() in *library(survival)* 911
 survfit() in *library(survival)* 907
 Survival.cph() in *library(rms)* 929
 symmetry_test() in *library(multcomp)* . 672

T

t0 47, 946
 t.test() 383, 388, 515, 549, 552, 564
 table() 72, 957, 958
 tan() 956
 tapply() 955
 text() 963
 title() 963
 toleranz() 437
 transform() 948
 trunc() 956
 truncnorm() 286

U

uniroot() 518, 607
 update() zu glm() 856, 876
 update() zu lm() 837, 849

V

V.Cramer() 761
 var() 224, 226, 957
 var.test() 534, 535
 VIF.ICC() 897

W

weighted.mean() 100
 while() 953
 wilcox.exact() in
library(exactRankTests) 520
 wilcox.test() 396, 520, 546, 573–575,
 583, 584
 wilcox_test() in *library(coin)* 575, 602
 wilcoxonsign_test() in *library(coin)* . 583, 603
 winsor() 94

X

xtable() 884
 xyplot() in *library(lattice)* 886