Package 'mtanan'

July 23, 2025

Title Single Valued Neutrosophic Kruskal-Wallis and Mann Whitney Tests

Version 0.0.1

Description Dealing with neutrosophic data in single valued form using score, accuracy and certainty functions to calculate ranks of Single Valued Neutrosophic Set (SVNS), also to calculate the Mann-Whitney test, and making a post-hoc test after rejecting the null hypothesis using the Neutrosophic Statistics Kruskal-Wallis test. For more information see Miari, Mahmoud; Anan, Mohamad Taher; Zeina, Mohamed Bisher(2022) <https://digitalrepository.unm.edu/nss_journal/vol51/iss1/60/>.

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Encoding UTF-8

RoxygenNote 7.3.1

NeedsCompilation no

Author Mohamad Taher Anan [aut, cre] (ORCID: <https://orcid.org/0009-0005-9468-6262>), Mohamad Bisher Zeina [aut], Aya Khantomani [aut], Mahmoud Miari [aut]

Maintainer Mohamad Taher Anan <mtanan200988@gmail.com>

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fanan *This function to calculate the kruskal test(with neutrosophic data)*

Description

This function to calculate the kruskal test(with neutrosophic data)

Usage

```
fanan(dt)
```

Arguments

dt	ia a data frame

Value

kruskal test

Examples

```
fac=c(rep("1",6),rep("2",6),rep("3",4))
t=c(0.4,0.42,0.04,0.46,0.08,0.33,0.13,0.003,0.0095,0.44,0.003,0.62,0.15,0.498,0.36,0.464)
i=c(0.06,0.071,0.5,0.14,0.03,0.30,0.45,0.074,0.17,0.28,0.48,0.072,0.62,0.148,0.831,0.761)
f=c(0.46,0.37,0.21,0.31,0.171,0.21,0.39,0.083,0.41,0.42,0.31,0.18,0.29,0.748,0.625,0.551)
dt=data.frame(t,i,f,fac)
fanan(dt)
```

s_sort *SORTING DATA*

Description

SORTING DATA

Usage

```
s_sort(y1, y2, ac, ce, rw)
```

Arguments

y1	is a score variable
y2	is a string variable but in numeric elements
ac	is an accuracy variable
ce	is a certainty variable
rw	rw is a number of rows in dt

Value

sorting Data

Examples

```
fac=c(rep("1",6),rep("2",6),rep("3",4))
t=c(0.4,0.42,0.04,0.46,0.08,0.33,0.13,0.003,0.0095,0.44,0.003,0.62,0.15,0.498,0.36,0.464)
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f=c(0.46,0.37,0.21,0.31,0.171,0.21,0.39,0.083,0.41,0.42,0.31,0.18,0.29,0.748,0.625,0.551)
dt=data.frame(t,i,f,fac)
sc=(2+dt[,1]-dt[,2]-dt[,3])/3
ac=dt[,1]-dt[,3]
ce=dt[,1]
y1=sc
y1=round(y1,2)
y2=as.character(dt[,4])
rw=nrow(dt)
ff=s_sort(y1,y2,ac,ce,rw)
ff=s_sort(ac,y2,y1,ce,rw)
ff=s_sort(ce,y2,ac,y1,rw)
ff=s_sort(y1,y2,ac,ce,rw)
y1=ff$y1
y2=ff$y2
ac=ff$ac
ce=ff$ce
ff=data.frame(y1,y2,ac,ce)
print(ff)
```

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