Package: distinctiveness (via r-universe)

October 10, 2024

Type Package

Title Distinctiveness Centrality

Version 1.0.1

Description Calculates Distinctiveness Centrality in social networks.
For formulas and descriptions, see Fronzetti Colladon and Naldi
(2020) <doi:10.1371/journal.pone.0233276>.

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URL https://github.com/iandreafc/distinctiveness-R,

https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0233276

Depends R (>= 3.5.0)

Imports igraph

Encoding UTF-8

RoxygenNote 7.2.3

Repository https://iandreafc.r-universe.dev

RemoteUrl https://github.com/iandreafc/distinctiveness-r

RemoteRef HEAD

RemoteSha de8954f0f36869af72343fc1c34e875c4350874b

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distinctiveness	*The main function; oversees the calculations of Distinctiveness Centrality*

Description

The main function; oversees the calculations of Distinctiveness Centrality

Usage

```
distinctiveness(
  G,
  alpha = 1,
  normalize = FALSE,
  measures = c("D1", "D2", "D3", "D4", "D5")
)
```

Arguments

G	the given graph
alpha	the given exponent for penalizing connections to highly connected nodes
normalize	when TRUE, the function normalizes output metrics to allow for comparison with other graphs. Defaults to FALSE
measures	the measures of Distinctiveness Centrality to be computed

Value

a data frame containing the specified calculated measures of Distinctiveness Centrality for the given graph

Examples

```
g <- igraph::erdos.renyi.game(20, 50, type = "gnm", directed = FALSE)
plot(g)
distinctiveness(g)
distinctiveness(g, alpha = list(2, 1, 3, 2, 4), measures = c("D1", "D3", "D4"))

g_dir <- igraph::erdos.renyi.game(20, 50, type = "gnm", directed = TRUE)
plot(g_dir)
distinctiveness(g_dir)
distinctiveness(g_dir, alpha = 2, normalize = TRUE, measures = c("D2", "D5"))
```

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