

Package ‘biclique’

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Title An R package to compute bicliques

Version 1.0.0

Encoding UTF-8

Description This package is used to enumerate bicliques in the bipartite graph.

URL <https://github.com/YupingLu/biclique>

BugReports <https://github.com/YupingLu/biclique/issues>

Depends R (>= 3.1)

Imports graphics,
utils

License GPL (>= 2)

RoxygenNote 5.0.1

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bi.clique	<i>Biclique enumeration</i>
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Description

This function will compute the bicliques and output the statistics of these bicliques. If you want to get bicliques above a threshold, you can change the values of lleast and rleast. The input file should be tab delimited with number of vertices and edges at the head of the input file. If your input file does not have these values, you can use function bi.format to add these values to it. This package supports edgelist and binary matrix file format. Two versions of algorithms are implemented in this function, you can choose either one to get bicliques.

Usage

```
bi.clique(filename, lleast = 1, rleast = 1, version = 1, filetype = 0,
  envir = .GlobalEnv$.bienv)
```

Arguments

filename	Input file name
lleast	Least number of left partite <default = 1>
rleast	Least number of right partite <default = 1>
version	Algorithm version <default = 1> [1 2]
filetype	Input file format <default = 0>. 0-edge list, 1-binary matrix.
envir	biclique environment

Examples

```
## Not run:
bicliques = bi.clique("example1.el")
bicliques = bi.clique("example1.el", 3, 2)
bicliques = bi.clique("example4.bmat")

## End(Not run)
```

bi.degree

Get the degree list

Description

This function will output the degree of each vertex.

Usage

```
bi.degree(filename, filetype = 0)
```

Arguments

filename	Input file name
filetype	Input file format <default = 0>. 0-edge list, 1-binary matrix.

Examples

```
## Not run:
degreeelist = bi.degree("example1.el")
degreeelist = bi.degree("example4.bmat", 1)

## End(Not run)
```

bi.format	<i>Add number of vertices and edges to the input file</i>
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Description

This function will calculate the number of vertices and edges and add them to the head of the input file. The original input file will be changed.

Usage

```
bi.format(filename, filetype = 0)
```

Arguments

filename	Input file name
filetype	Input file format <default = 0>. 0-edge list, 1-binary matrix.

Examples

```
## Not run:
bi.format("example2.el")
bi.format("example5.bmat", 1)

## End(Not run)
```

bi.print	<i>Print the bicliques</i>
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Description

You can pass results from function bi.clique to this function to visualize the bicliques.

Usage

```
bi.print(envir = .GlobalEnv$.bienv)
```

Arguments

envir	biclique environment
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Examples

```
## Not run:
bi.print()

## End(Not run)
```

biclique

An R package to compute bicliques

Description

biclique package.

Author(s)

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