

# 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)

**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)
```

**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.

**Examples**

```
bicliques = bi.clique("example1.el")
bicliques = bi.clique("example1.el", 3, 2)
bicliques = bi.clique("example4.bmat")
```

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bi.degree	<i>Get the degree list</i>
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**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**

```
degreeelist = bi.degree("example1.el")
degreeelist = bi.degree("example4.bmat", 1)
```

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`bi.format`*Add number of vertices and edges to the input file*

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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**

```
bi.format("example2.el")
bi.format("example5.bmat", 1)
```

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`bi.print`*Print the bicliques*

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**Description**

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

**Usage**

```
bi.print(bi, text = 0)
```

**Arguments**

bi	bicliques
text	default is 0. If you want to show labels, change it to 1.

**Examples**

```
bi.print(bicliques)
```

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biclique

*An R package to compute bicliques*

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**Description**

biclique package.

**Author(s)**

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