Package ‘lazygreedy’

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Title Applying the Lazy-Greedy Spanning Algorithm
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Description Provides an R wrapper for an efficient C++ implementation of the Lazy-Greedy spanning algorithm of Bouts, ten Brink, and Buchin (2014) <DOI:10.1145/2582112.2582154>.
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R topics documented:

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Description

Function `lazyGreedy` is an R wrapper for an efficient C++ implementation of the Lazy-Greedy spanning algorithm. The C++ implementation executes many thousands of times faster than a pure R implementation. Both the algorithm and (most of) the C++ implementation were developed by Quirijn W. Bouts, Alex P. ten Brink, and Kevin Buchin.
Usage

`lazyGreedy(V, t)`

Arguments

- `V` a numeric `n`-by-2 matrix the `i`th row of which contains the location in \( R^2 \) of vertex `i`.
- `t` the desired dilation, a positive real number.

Value

Function `lazyGreedy` returns a greedy \( t \)-spanner for the set of vertices `V`. The result takes the form of an edge list.

References


Examples

```r
n = 20
V = cbind(runif(n), runif(n))
spanner = lazyGreedy(V, t = 2)

## Not run:
require("network")
G = network(spanner, directed = FALSE)
plot(G, coord = V, label = 1:n, jitter = FALSE)

## End(Not run)
```
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