summary: An R htmlwidget interface to the sigma.js visualization library

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Summary

With the rise in popularity of networks, it is important for R users to have access to a package that allows visualising the aforementioned networks in a highly configurable, interactive and dynamic manner. sigma.js is a fully-fledged wrapper for the sigma.js JavaScript library.

The sigma.js JavaScript library is described as follows on its website:

Sigma is a JavaScript library dedicated to graph drawing. It makes easy to publish networks on Web pages, and allows developers to integrate network exploration in rich Web applications.

The package sigma.js (Coene, 2018) bridges the sigma.js JavaScript library and R (R Core Team, 2018) via the htmlwidgets package (Vaidyanathan, Xie, Allaire, Cheng, & Russell, 2018). The package also extends the original JavaScript library (sigma.js) by providing additional functions, namely using the igraph package (Csardi & Nepusz, 2006) to enable the user to layout and cluster graphs. Finally sigma.js is also integrated with the crosstalk package (Cheng, 2016) which lets graphs be wired to other htmlwidgets such as plotly (Sievert et al., 2017) and leaflet (Cheng, Karambelkar, & Xie, 2018).

Functionality

Graphs are initialised with sigma.js(), all other functions start with sg_. and its Shiny (Chang, Cheng, Allaire, Xie, & McPherson, 2018) proxies end with _p. Functions can be piped, referring to the magrittr package (Bache & Wickham, 2014) pipe operator (%>%), to build the desired graph.

• Shiny proxies.
• Crosstalk integration.
• Buttons to trigger various animations and events.
• Possibility to capture graph interactions in Shiny.

The R package sigma.js is available on GitHub or Bitbucket, issues can be opened on Github only. All functions are documented in the package (.Rd files) as well as online with the R package pkgdown (Wickham & Hesselberth, 2018).

References


