

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

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Software

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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. `sigmaj` 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 `sigmaj` (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 `sigmaj` 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 `sigmaj()`, 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 `sigmaj` 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).

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