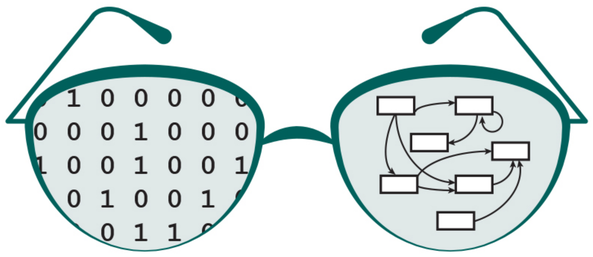

GRNsight

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About

GRNsight is a web application and service for visualizing models of small- to medium-scale gene regulatory networks (GRNs).

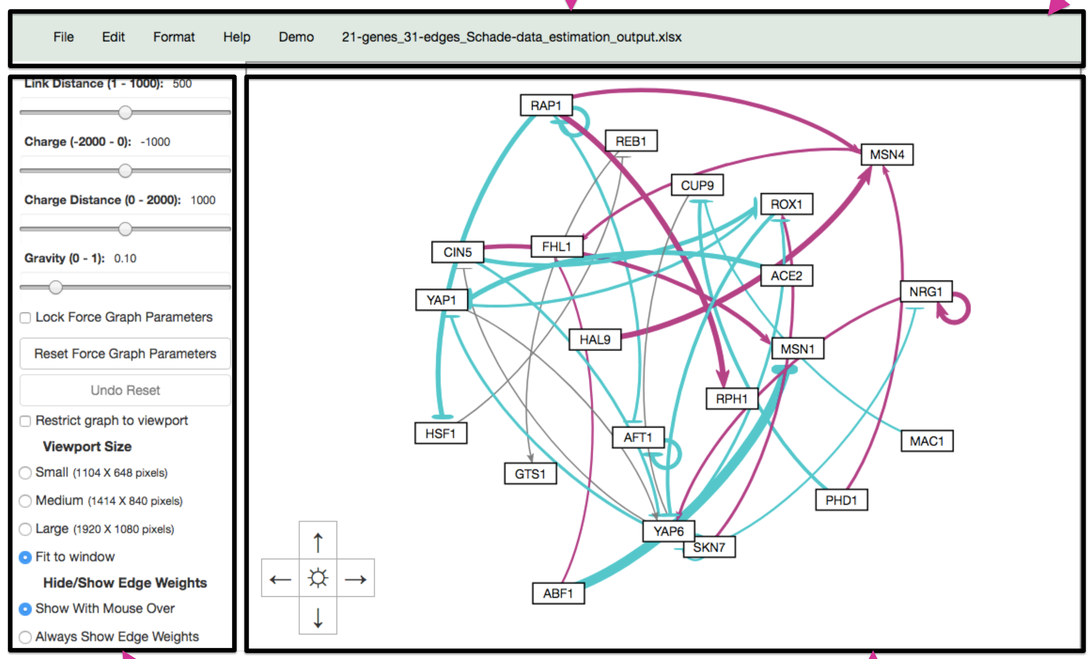
It accepts a representation of a GRN in XLSX, SIF, or GraphML format and outputs them as a directed graph.

Transcription factors are displayed as nodes, with edges representing the relationships between them.

Motivation

We wanted to create a web-based, intuitive, open-source application for visualizing GRNs that is simple and easy to use.

Snapshot of User Interface



The menu bar provides options for loading GRNs, formatting them, and exporting to SIF/GraphML.

It also provides sample files for users to test GRNsight, and links to resources if they want to know how to format their data for upload.

It displays the current graph name when a graph is loaded, as well as the number of nodes and edges in the graph.

The side bar contains options for changing how the graph is drawn, with elements such as the force graph parameter sliders, viewport size toggle, and edge weight toggle, among others.

The viewport is where the graph is drawn.

Users can adjust their view of the graph using the mouse to click-to-drag and mouse wheel to zoom, or by using the on-screen controls.

Acknowledgements

GRNsight Team

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Technologies

D3.js: Graph engine → Mocha & Chai: Testing → Node.js & Express: Server → Jade & Stylus: Website