Input Format and Samples

Data Import

PiperNet accepts both the CSV and GEXF inputs. The following possible approaches are the several ways you can import data to this application.

- Importing nodes with labels and their relations

The easiest is probably to just have a CSV file like this one:

```
Source,    Target
Jeremy,    Jennifer
Valerian,  Jeremy
```

which specify the simple undirected relationship between `Source` and `Target`. This type of input kind can be achieved by selecting "**only edge file**" on import dialogue.

- Importing more than labels: nodes and edges attributes

To import attributes we will need to proceed differently. We need 2 CSV files: one for the list of nodes, one for the list of relations (edges)

Nodes must have at least an `ID` (you can specify which column is the ID), other fields are optional, an example file with a list of nodes:

```
Id, Label,      Date of Birth,  Place of Birth,    Years of
experience,    Rating
3,  Dubois,     17/09/1980,     Paris,
8,                      9.27
1,  Jeremy,     25/03/1978,     Tampa,
8,                      4.34
45, Rodriguez,  30/04/1985,     Berlin,
5,                      6.66
```

Edges must have at least a `Source` and `Target`, other fields are optional, an example file with a list of edges:

```
Source, Target, Weight,   Where first met
1,      45,     3,        London
```

- Importing with GEXF format

GEXF (Graph Exchange XML Format) is a language for describing complex networks structures, their associated data and dynamics. PiperNet can import and export GEXF files with all necessary graph data stored in it.

The Dynamic GEXF is currently not yet supported in PiperNet, and might not support unless enough functionalities added to enhance the interactivity of Dynamic GEXF.Input Format: GEXF

GEXF (Graph Exchange XML Format) is a language for describing **complex networks** structures, their associated data and dynamics. we support for importing and exporting standard GEXF files to ease the saving and sharing boundaries of sophisticated graph data structure.

https://gephi.org/gexf/format/

Example datasets

Sample Datasets are located inside this repository at `/src/samples`, enjoy and have fun :)

Name	Type	Reference	File Location
the **Les Miserables** Character Relationship graph	EDGE NON-CLUSTERED	https://www-cs-faculty.stanford.edu/~knuth/sgb.html	`/lesmiserables`
EuroSiS web mapping study: Mapping interactions between Science in Society actors on the Web of 12 European countries		http://www.webatlas.fr/exhibition/eurosis/	`WebAtlas_EuroSiS.gexf`
Internet: a symmetrized snapshot of the structure of the Internet at the level of autonomous systems.		http://routeviews.org/	`internet_routers-22july06.gexf`
Diseasome: A network of disorders and disease genes linked by known disorder–gene associations, indicating the common genetic origin of many diseases. Genes associated with similar disorders show both higher likelihood of physical interactions between their products and higher expression profiling similarity for their transcripts, supporting the existence of distinct disease-specific functional modules.		The original dataset can be found here: The Human Disease Network, Goh K-I, Cusick ME, Valle D, Childs B, Vidal M, Barabási A-L (2007), Proc Natl Acad Sci USA 104:8685-8690	`diseasome.gexf`
C. Elegans neural network: A directed, weighted network representing the neural network of C. Elegans. Data compiled by D. Watts and S. Strogatz and made available on the web here.		D. J. Watts and S. H. Strogatz, Nature 393, 440-442 (1998). Original experimental data taken from J. G. White, E. Southgate, J. N. Thompson, and S. Brenner, Phil. Trans. R. Soc. London 314, 1-340 (1986).	`celegans.gexf`
Java code: Source code structure of a Java program, by S.Heymann & J. Palmier, 2008.			`codeminer.gexf`
CPAN authors: CPAN Explorer is a visualization project aiming at analyzing the relationships between the developers and the packages of the Perl language, known as the CPAN community. This file contains the network of developers, linked when they use the same Perl module		http://cpan-explorer.org/	`cpan-authors.gexf`
Coauthorships in network science: coauthorship network of scientists working on network theory and experiment, as compiled by M. Newman in May 2006. A figure depicting the largest component of this network can be found here.		M. E. J. Newman, Phys. Rev. E 74, 036104 (2006).	`netscience.gexf`
The Marvel Social Network Networks of super heroes, constructed by Cesc Rosselló, Ricardo Alberich, and Joe Miro from the University of the Balearic Islands.		Collected by Infochimps and transformed & enhanced by Kai Chang.	`hero-social-network.gexf`
Airlines			`airlines.gexf`
Power grid: An undirected, unweighted network representing the topology of the Western States Power Grid of the United States.		Data compiled by D. Watts and S. Strogatz and made available on the web here. Please cite D. J. Watts and S. H. Strogatz, Nature 393, 440-442 (1998).	`power.gexf`