Primary Function

A single github page website, that creates a visual (ego) network based on a file and a search function that finds a given release in said file.

Specifics for the search function

The search function should be able to find releases with similar names, not just exact matches - and based on searching for both artist or labels. Furthermore, the search function should have a “depth” option, to signify the depth of the ego network.

The Network

The ego networks should use an energy layout algorithm to spatialize the individual networks each time, specifically avoiding overlap of nodes and using LinLog or similar to promote clustering. Node size should be uniform, and node color be set based on the “Modularity Class” column in the data (with a custom color gradient to properly differentiate all 102 modularity classes visually). Furthermore, edge labels or color should be togglable, in terms of viewing whether an edge stems from an artist or label (information available in dataset already).
Ideally, the network should also show how many edges and nodes are visible, out of the entire network file.

Filters and metadata

“Hovering” over a node should show its label and associated neighbors. Furthermore, clicking on a node should give a view of its associated metadata:

- Title
- Arist
- Record Label
- Year(s) of Release
- Music Style(s)
- Countries of Release
- Want/Have Community Metric
- Popularity Metric (want/have delta)
- Direct url (hyperlinked) to the Discogs page of the release

There should also be an option to “filter” a network, to only include releases that fit parameters based on: artists, labels, year(s), style(s), countries, want/have gauge or popularity metric. This might require changing the data file to keep country or style data as a list or it could be fixed in the search function itself. Ideally, things like “year of release” or other integer based filters, should be made as a slider.

Plugins

Sigma.js is probably the best bet, but I don’t think it can do ego networks. Worst case, we have to go through NetworkX and matplotlib to get it working, but that is probably not ideal.