Website Instruction

Step 1: Follow the instructions to upload the file:

In step 1, you first need to upload two files, the community information file (real) and the local information file (adj). Please refer to the format in the Test-datesets folder. Take Karate network as an example:

Figure 1 Step 1: Follow the instructions to upload the file

1	0
2	0
3	0
4	0
5	0
6	0
7	0
8	0
9	1
10	1
11	0
12	0
13	0
14	0
15	1
16	1
17	0
18	0
19	1
20	0
21	1
22	0
23	1
24	1
25	1
26	1
27	1
28	1
29	1
30	1
31	1
32	1
33	1
34	1

Figure 2 karate_real.csv

Community information file (real): Figure 2 shows the karate_real.csv file from Test-datasets opened using Excel. It contains only one column of elements, each of which represents the real community division to which the node belongs. For example, node 1 belongs to community 0 and node 9 belongs to community 1.

1	0	1	1	1	1	1	1	1	1	0	1	1
2	1	0	1	1	0	0	0	1	0	0	0	0
3	1	1	0	1	0	0	0	1	1	1	0	0
4	1	1	1	0	0	0	0	1	0	0	0	0
5	1	0	0	0	0	0	1	0	0	0	1	0
6	1	0	0	0	0	0	1	0	0	0	1	0
7	1	0	0	0	1	1	0	0	0	0	0	0
8	1	1	1	1	0	0	0	0	0	0	0	0
9	1	0	1	0	0	0	0	0	0	0	0	0
10	0	0	1	0	0	0	0	0	0	0	0	0
11	1	0	0	0	1	1	0	0	0	0	0	0
12	1	0	0	0	0	0	0	0	0	0	0	0
13	1	0	0	1	0	0	0	0	0	0	0	0
14	1	1	1	1	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	1	1	0	0	0	0	0
18	1	1	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	1	1	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	1	1	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	1	0	0	0	0	0	0	0	0	0
29	0	0	1	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
31	0	1	0	0	0	0	0	0	1	0	0	0
32	1	0	0	0	0	0	0	0	0	0	0	0
33	0	0	1	0	0	0	0	0	1	0	0	0
34	0	0	0	0	0	0	0	0	1	1	0	0

Figure 3 karate_adj.csv

local information file (adj): Figure 3 shows the karate_adj.csv file from Test-datasets opened using Excel. The figure does not show all the contents of the file. It contains 34*34 elements, the adjacency matrix of the network.

Since there is a capacity limit on the server, we choose to upload local information file instead of the original network when building the website (which may increase the overhead of the server). Also, the maximum size for file upload is 512MB. If you want to test your own datasets, please upload files strictly in the format described above, otherwise errors may occur, and please reopen the URL: http://39.99.195.136:8081/ in case of errors.

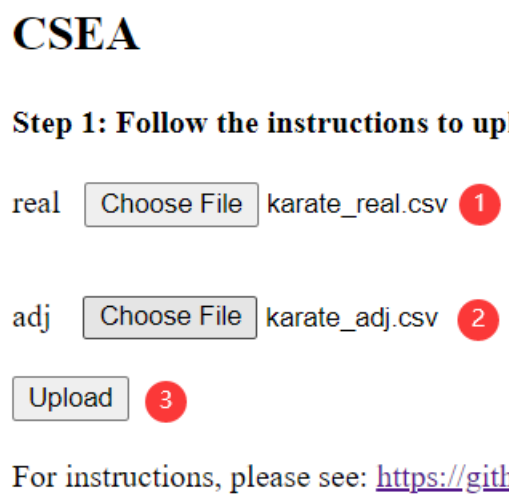

Figure 4 Step 1 order

When the two file submissions are complete, click the Upload button.

Step 2: Follow the instructions to fill in the parameters:

In step 2, there are 6 parameters to fill in. Take Karate network as an example:

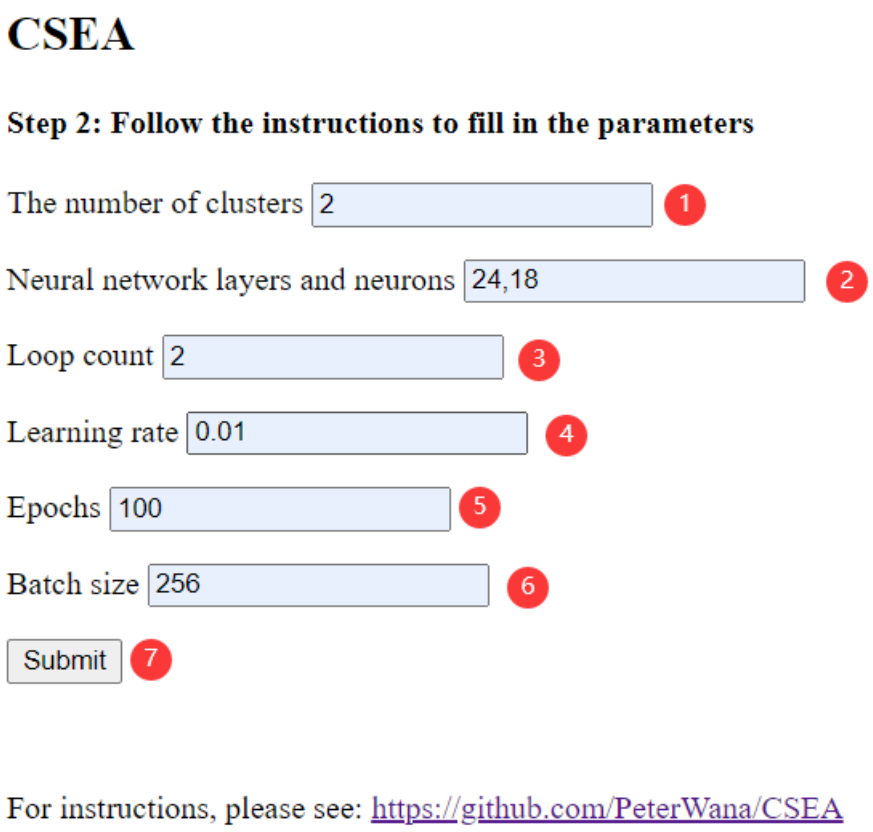

Figure 5 Step 2: Follow the instructions to fill in the parameters:

As shown in Figure 5, the first parameter is The number of clusters, for example there are 2 clusters in the karate network (only 0 and 1 in karate_real.csv). The second

parameter is the Neural network layers and neurons, for example, "24, 18" means the neural network has two layers, the number of neurons in the first layer is 24, and the number of neurons in the second layer is 18). The "," must use half-width English symbols, and no space is allowed between each character. The third parameter is the Loop count, for example, "2" means 2 runs on this dataset. The fourth, fifth and sixth parameters are the Learning rate, Epochs and Batch size of the neural network, respectively. Click the Submit button after filling in the 6 parameters.

Finally, please fill in the parameters in strict accordance with the above format, otherwise errors may occur, and please reopen the URL: http://39.99.195.136:8081/ in case of errors.

Step 3: View the results under your selected parameters:

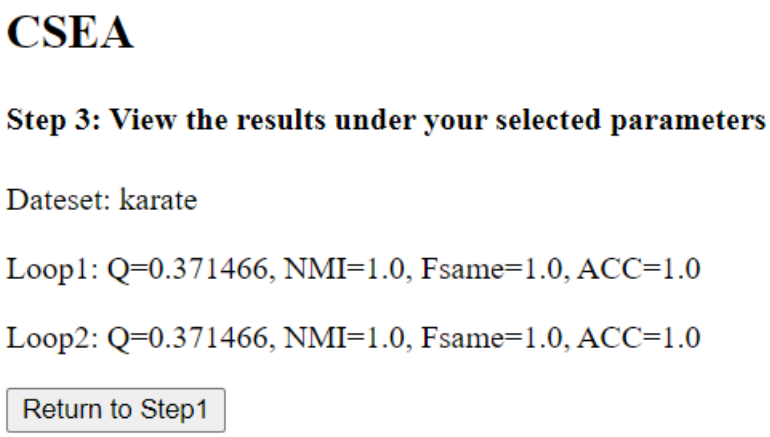

Figure 6 Step 3: View the results under your selected parameters

In Step 3, we can get the results of the CSEA algorithm for the uploaded network according to the set parameters. Click the Return to Step1 button to return to the initial page. When the size of the network dataset, the size of the neural network settings or the loop count is too large, it may take some time to run to get the results, please be patient.