Social Network Analysis Home Assignment 3

{Your Name}

due date - 05.06.2017 23:59

Contents

Network communities

Please send your reports to hse.ntwks@gmail.com with the subject of of the following structure: *[MAGOLEGO SNA 2017] {LastName} {First Name} HW{Number}*

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Use this file as a template for your report.
Support your computations with figures and comments. Send ONLY .Rmd versions of your report.

```
##
## Attaching package: 'igraph'

## The following objects are masked from 'package:stats':
##
##     decompose, spectrum

## The following object is masked from 'package:base':
##
##     union
```

Yahoo Music Network

For this assignment, you have to load the part of Yahoo Music Network. Archive contains network in GML format and corresponding list of artists.

```
## Put your code here
```

Edges in this network appear if enough number of users have given ratings to both music bands. Note, that edges are weighted with similarity of the ratings.

1. Preprocessing

This network needs to be preprocessed. Do the steps, described on seminar, to make it look properly. How many vertices and edges were deleted?

```
## Put your code here
```

2. Clustering

Define clusters for this networks using one of the algorithms described on lectures and seminars:
```
## Put your code here
```

Compute density of obtained clusters:
```
## Put your code here
```

Compute the ratio of inner clusters connections to outer ones:
```
## Put your code here
```

3. Visualization & interpretation

Visulize five of the most dense clusters. Use names of artists as node labels on the graph.
```
## Put your code here
```

(Extra task) Try to interpret (using Wikipedia or other resources) obtained clusters.

Insert comments here