

Thematic networks in genomic research. Tools for strategic analyses

February 2, 2013

1 Main Topic

The topic of this research project are the interactions among MeSH terms related to genomics.

2 Objectives

2.1 General objectives

The project has two general objectives:

1. To develop software tools for strategic analyses based on genomics related MeSH terms interactions modeling.
2. To understand the structure and dynamics of genomics research topics networks by means of MeSH terms interactions.

2.2 Specific objectives

1. To model and analyze thematic networks
2. To develop visualization software
3. To analyze MeSH terms network topology
Analizar la topología de las redes

4. To identify trending topics related to genomics
5. To develop tools intended to predict trending topics

3 Methods and Materials

1. Data mining
2. Text mining
3. Modeling and analyzing networks using NetworkX and Cytoscape
4. Network visualization using OpenGL
5. All software will be under subversion control