Project Abstract

INFSCI 2415 Information Visualization

Project Name: Contagious Diseases in the United States: Trends and Cycles in the Past 120 Years

Team Members:

He, Jiexiao (jih102@pitt.edu)
Song, Chen (chs222@pitt.edu)
Xie, Jingran (jix73@pitt.edu)

Abstract

After reviewing the suggested topics, we chose Project Tycho for our term project. Project Tycho is an interesting project and contains datasets with large spatial and temporal ranges from several data sources, which could give us a great chance to design different schemes of data visualizations.

We will use level 2 and 3 datasets from Project Tycho which contain the weekly cases and death counts of more than 50 kinds diseases by city and state in the US from 1888 to present. We plan to visualize the spatial and temporal patterns about these contagious diseases by focusing on three questions: 1) In a long range of time, were these diseases reduced by vaccinations, when and where? 2) Which diseases have (seasonal) cycles and which do not? 3) Respecting the geospatial locations, are there some places more vulnerable to some diseases and why?

We also plan to use population and GDP per capita data of every state to address the rate of diseases and the level of economical development which may have effect to epidemic prevention. Population information can be found in Historical Statistics of United States database (http://hsus.cambridge.org) and The Census Bureau (https://www.census.gov). GDP per capita information can be found in Bureau of Economic Analysis (https://bea.gov).