HIST3907 – Data Mining

Lecture Notes

February 25, 2015

GIS

Geographic Information Systems

Initially, not about mapping. They are info with a physical component to it.

Based on layers.

i.e. layer of grass over layer of rock or soil over groundwater, etc.

Information has a physical place in the world.

Question: the top left quadrant bias. How to use it? Does the legend go there?

GIS does not handle time well.

Historians want to do change over time.

*Georectifying*

Rectify implies correction or transformation.

Once you have three points on any map and know their relationship to one another, can triangulate and plot to scale an entire map.

More points = higher resolution rectification.

[www.Warp.worldmap.harvard.edu](http://www.Warp.worldmap.harvard.edu)

Map Warper. Will allow you to rectify a map using google Earth through triangulation on the historical map.

Once tagged, can export to different formats. i.e. GeoTiff, which could be used with other GIS software.

Leaflet.js can help design a website.

Can import to [www.cartodb.com](http://www.cartodb.com). Can import from Dropbox to this site, so save GeoTiff there.

Find map of roman ampitheatres. Prof has script for geolocating ampitheatres. Using the url that contains the script and pasting the url into cartodb will create a map that can illustrate the difference between east and western empire.

Sebastian Heath on Gitgub

SFSHEATH

[www.togeojson.com](http://www.togeojson.com)

paste in CSV in and it reformats it as a GeoJSON. Upload it to gist.github.com.

GeoJSON

Back in mapwarper, get tiles based url.

Alter output url

From: www.warp.worldmap.harvard.edu/maps/tile/2273/z/x/y/.png

To : www.warp.worldmap.harvard.edu/maps/tile/2273/{z}/{x}/{y}/.png

This will allow mapwarper to use it.

Historical lMaps

David Rumsey Map Collection

Edinborough Geoparser

Run names against gazeteers

[www.App.raw.densitydesign.org](http://www.App.raw.densitydesign.org)

can use to export as an image or as a json file for import to cartodb, etc.

densitydesign is also on github and a local copy can be installed.

[www.Lincolnmullen.com](http://www.Lincolnmullen.com)

<http://www.helsinki.fi/varieng/CoRD/corpora/>

lots of corpi!