HIST 1906: Digital Atlas Design Internship (Spring 2023)

Meetings:
Thursdays 3-5pm
in
The World History Center
Posvar Hall, Room 3900

Office Hours:
Thursdays, 12-3pm
in
The World History Center
Posvar Hall, Room 3900

Class Schedule

Overview

The Digital Atlas Design Internship supports student research by teaching interns how to use digital tools and methods to explore the global past. Students manage a semester-long independent research project using an interactive, public-facing platform that utilizes GIS and

web design skills gained during the internship. Students engage with both world history and digital humanities while developing a spatial database about a topic of their choosing. Experience with digital methods or GIS is not necessary, and students can receive publication credit for their work.

Objectives

By the end of this internship, students will be able to

- Define GIS and HGIS
- Use ArcMap and QGIS
- Differentiate, analyze, and create Vector and Raster data
- Obtain GIS information from various sources
- Apply geospatial tools to historical questions

Students will combine the above skills to serve the two main objectives of the course:

- Populating a gallery of atlases based on QGIS and ESRI StoryMaps. Student contributions will blend writing, images, georeferenced historical maps, and authored maps.
- Supporting student research and expanding student skills. Students will spend an entire semester managing an independent project. They will expand their GIS and web design skills. They will also work with world history and digital humanities methodologies. In the end, students will have projects to list on their résumés and in portfolios.

Required Materials

This course assumes that students have a computer, or access to one, during the practicum. If this is not the case, please see the instructor.

Students will be required to purchase a Reclaim Hosting (reclaimhosting.com) subscription ($35) for hosting their digital presence and posting each week's practicum in blog form. We will go over this subscription and how to set up WordPress on the platform on the first day of class.

Assignments

- **Weekly Practicum:**
  - o Every week each student will post a response to the practicum in blog form to their website hosted on Reclaim Hosting. These blog posts will be due the Monday following class.
- **Final Project:**
  - o Each student will produce an independent project using ESRI's StoryMaps platform. The final project will be housed on the World History server at Pitt as part of the growing digital atlas project. To facilitate this, all data and your final project will be licensed under Creative Commons Attribution 3.0, ODbL, or

another open-access license. If this is not possible, then some alternative will be worked out with the instructor.

Classroom Expectations

Students should arrive at class on time and use their computers and devices appropriately. Unless absolutely necessary for in-class learning activities, cell phones should be put away for the duration of the class.

This class is designed both to facilitate discussion and foster skills, which require sustained interaction with the instructor and your peers. As such, attendance is mandatory for all set meetings. Since discussion is an essential component of the class, students are expected to actively participate and engage other students and their opinions with dignity and respect. Students are expected to maintain a level of respect for the instructor and fellow students at all times, including using respectful language.

Students are expected to use non-racist, non-sexist, and gender-inclusive language. Racially charged language will not be permitted in the class. Historians often study periods that used racially charged language, and it is important that if we reproduce that language we do so sensitively and with respect and consideration to the victims of the language of the time and our peers in the present.

Similarly, language is gender-inclusive and non-sexist when we use words that affirm and respect how people describe, express, and experience their gender. Just as sexist language excludes women's experiences, non-gender-inclusive language excludes the experiences of individuals whose identities may not fit the gender binary, and/or who may not identify with the sex they were assigned at birth. Identities including trans, intersex, and genderqueer reflect personal descriptions, expressions, and experiences. Gender-inclusive/non-sexist language acknowledges people of any gender (for example, first-year student versus freshman, chair versus chairman, humankind versus mankind, etc.). It also affirms non-binary gender identifications and recognizes the difference between biological sex and gender expression. Students, faculty, and staff may share their preferred pronouns and names, and these gender identities and gender expressions should be honored.

Academic Honesty and Plagiarism

Every student is expected to produce their own work based on their own ideas and cite anyone else's ideas or words appropriately. Certain material that an average person would consider common knowledge does not need to be cited. Such information would include that Christopher Columbus sailed across the Atlantic Ocean in 1492 or the American Revolution began in 1776. Other information, however, needs to be cited if it did not originate in your mind. More information on

Pitt's academic integrity code can be found online:
https://www.as.pitt.edu/faculty/policies-and-procedures/academic-integrity-code

Disabilities and Academic Accommodations

If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and the Office of Disability Resources and Services, 140 William Pitt Union, 412-648-7890/412-624-3346 (Fax), as early as possible in the term. Disability Resources and Services will verify your disability and determine reasonable accommodations for this course. For more information, visit https://www.diversity.pitt.edu/disability-access/disability-resources-and-services

Religious Holidays

If any assignments or due dates interfere with your personal religious observation, I will be happy to make accommodations. Remember, it is the responsibility of the student, within the first two weeks of the semester, to let me know the dates of major religious holidays on which the student will be absent or unavailable due to religious observances. Please, see the Pitt Office for Equity, Diversity, and Inclusion religious holiday calendar: https://www.diversity.pitt.edu/events/holiday-calendar

Student Resources

Online Learning Services and Resources (https://www.cgs.pitt.edu/online-courses/learning-services-resources) University Libraries (https://www.library.pitt.edu/)Writing Center (https://www.writingcenter.pitt.edu/)University Counseling Center (https://www.studentaffairs.pitt.edu/cc/)

Student Privacy

Under FERPA laws, your federal education rights and privacy are transferred to the student and not the parent after the student turns 18 or attends a postsecondary educational institution like GMU. Therefore, I can only interact with you about your education in this course and cannot respond to questions about your performance in this course with anyone else but you. For more information, see the FERPA statement from Pitt (https://www.registrar.pitt.edu//students/ferpa)

E-mail Communication

When writing emails to me, be sure to include a subject line, address me properly by my title and last name, and sign off with your name. Proper email formatting skills are required in post-university life.

Each student is issued a University e-mail address (username@pitt.edu) upon admittance. This e-mail address may be used by the University for official communication with students. Students are expected to read e-mails sent to this account on a regular basis. Failure to read and react to University communications in a timely manner does not absolve the student from knowing and complying with the content of the communications. The University provides an e-mail

forwarding service that allows students to read their e-mail via other service providers (e.g., Hotmail, AOL, Yahoo). Students that choose to forward their e-mail from their pitt.edu address to another address do so at their own risk. If e-mail is lost as a result of forwarding, it does not absolve the student from responding to official communications sent to their University e-mail address. To forward an e-mail sent to your University account, go to http://accounts.pitt.edu, log into your account, click on Edit Forwarding Addresses, and follow the instructions on the page. Be sure to log out of your account when you have finished. (For the full E-mail Communication Policy, go to www.bc.pitt.edu/policies/policy/09/09-10- 01.html)

GIS Help

I am available via email most days within reasonable hours for help with your work. You can also email me for appointments outside of office hours for help. Finally, Hillman Library has its own GIS Librarian (Boris Michev) and GIS help desk. You can find more information about that here: http://www.library.pitt.edu/geospatial-data-and-analysis.

Week 1 (Jan. 12): Introduction

Class Activities on Thursday, Jan. 12.

- Present research Topics
- Tech Overview

Come to class ready to share your research topic and some questions that you might want to try to answer through mapping. Be prepared to stay the whole time since this class only meets once a week. During class, we will go do a general technology overview. I will introduce reclaim hosting where you will host your site on which you will submit all your assignments and ultimately embed your final project, an ESRI StoryMap. We will go over how to install WordPress on your new site. WordPress is an open-source program that makes creating a website and blogs very easy. I will go over how to download QGIS to your computer. QGIS will act as the primary means by which you will produce maps for this class. We will go over logging into ArcGIS Online (another mapping resource) and ESRI StoryMaps. Finally, we will discuss Zotero, where you will have access to all the readings for this course, along with other materials. This is a lot of information, but do not fret. It will all become pretty simple.

Homework Due Monday, Jan 16 (11:59 pm)

Download QGIS, create a reclaim hosting account, set up a WordPress blog, and make the first blog entry discussing your topic with four questions you hope to answer. Also, discuss the process of setting up accounts. What specifically was easy or difficult? Post a screenshot of active QGIS (or error messages if it fails) to the blog post.

Links to Downloads

- Zotero (https://www.zotero.org/)

- [QGIS](https://www.qgis.org/en/site/) (https://www.qgis.org/en/site/)
- [ArcGIS Online](https://www.arcgis.com/index.html) (https://www.arcgis.com/index.html)
- [ESRI StoryMaps](https://www.esri.com/en-us/arcgis/products/arcgis-storymaps/overview) (https://www.esri.com/en-us/arcgis/products/arcgis-storymaps/overview)
- [Reclaim Hosting](https://reclaimhosting.com/) (https://reclaimhosting.com/)

Support Videos on YouTube

Setup Reclaim Hosting Video
Install WordPress into Reclaim Hosting
Download QGIS

Week 2 (Jan. 19): Discussion and QGIS Intro

Class Activities on Thursday, Jan. 19

- Discuss Gregory and Ell, "GIS and its role in historical research: an introduction" (on Zotero)
- lat/long
- Text Editors
- Data types
- CSVs
- Vectors

After discussing Gregory and Ell's article (available on both and Zotero), we will go over the fundamentals of GIS data: latitude and longitude, CSVs (Comma Separated Values data format), Text Editors, and Vectors.

** Tutorial for Loading Vectors in QGIS: https://lincolnmullen.com/projects/spatial-workshop/qgis.html **

- Latitude measures how far north or south a location is on the globe. These lines travel horizontally on the map.
- Longitude measures how far east or west a location is on the globe, and these lines travel vertically on the map. I remember these by thinking that all of these lines are long whereas some latitude lines are short.
- Text editors are simple ways of displaying text with limited manipulation (no bold, italic, or underlines). They display text in lines that will go on for a long time unless you add word-wrapping (a feature that does not break the line of text but wraps it to make it more visible). Text editors are the tools developers use to code. They can be super simple like Notepad or incredibly powerful like Visual Studio Code (my favorite) or Vim (a terminal-based text editor I do not recommend).
- Data Types: "String" (a string of any number or letter), Integers (whole numbers), doubles or Real (decimal numbers), Date (YYYY-MM-dd), Time (HH:MM:SS+nn), DateTime (date and time, YYYY-MM-DD HH:MM:SS+nn)

- CSV is a simple data format with which you are already familiar, even if you do not know it: they basically work like a spreadsheet in which each line is a row of data, and the rows are separated by commas (hence comma-separated value).
  - name,age,profession
  - Adam,40,data analyst
  - Rebecca, 30, teacher
- Other data formats are similar to this, such as tab-separated values (TSVs), etc. We can also expand on the CSV with a CSVT (comma-separated Value Types) value. By default, CSVs are strings, but if we create a file in the same folder, with the same name, but with the extension .csvt that has only one line and the type for each column separated by commas, it will force those columns into that type. For the above example, the file would be
  - String, Integer, String
- The one line tells the program that the first column contains strings, the second integers (or whole numbers), and the third a string. This will be important when inputting CSV data into QGIS.
- Vectors are data in Geographic Information Systems (GIS) that are lines on the map (points, lines, multi-lines, polygons) as opposed to being represented as blocks of pixels (rasters, which we will discuss at a later date).

We will go over all of this much more during class.

Homework Due Monday, Jan. 23 (11:59 pm)
Write around 300 words in a blog about what electronic resources exist for your project. Was it easy to find shapefiles? Are there any related projects online? Do you think you can easily make some of your datasets for the project? Also, download and add at least three shapefiles from https://www.naturalearthdata.com/. Post screenshots of the three shapefiles in QGIS to the Blog.

Week 3 (Jan. 26): No Class/Meet with Advisor/Bibliography

Schedule Meeting with Advisor
Arrange a meeting with your content advisor during the week. Bring a revised project abstract and a series of spatial historical questions. Also, bring a draft outline and storyboard of your mapping project to discuss with your advisor.

Homework Due Monday, Jan. 30
Submit a bibliography and project outline as a blog post. Include at least one source of spatial data and at least three historical sources (books, journal articles, etc.). NB: try to get the bibliography done (or have a draft of it) before you meet with your advisor for their input.

Week 4 (Feb. 2): Gazetteers and ArcGIS

Class Activities on Feb. 2
ArcGIS Online Walkthrough

Discuss selections from Mostern Humphrey and Berman, *Placing Names: Enriching and Integrating Gazetteers* (2016). See Zotero.

As a class we will go over what a gazetteer is and how to make one.

Homework due Monday, Feb. 6
Build a gazetteer of at least 10 places of importance to your project and upload it your blog. Discuss in the blog how these places are important to your research.

Week 5 (Feb. 9): Discussion & Geo-referencing

Class Activities on Feb. 9
Bring a historical map that relates to your project to class in the Digital Scholarship lab. We will go over how to georeference a map, attaching (and stretching it if necessary) to coordinates on the map.

Then, we discuss Gregory and Ell, "Using GIS to Visualize Historical Data" (on Zotero). And finally, we will discuss theses and how to write good ones based on the two websites.

Homework due Monday, Feb. 20.
Georeference a map of some relevance to your project. Trace at least five points/lines/polygons from that map and add the project file you started with the three shapefiles. Post a discussion of the process to your site along with screenshots.

Geo-referencing in QGIS

Week 6 (Feb. 16): ESRI Story Maps

Come to class with some images related to your project and a rough draft or in-depth outline of your essay. We will go over the use of StoryMaps and how to add your information. Watch the support videos below before coming to class.

Homework due Monday (Feb. 20)
Begin inputting your work into a StoryMap. Not much writing is needed at this point in time. Think of it as outlining your StoryMap. Blog about the process of uploading your data and narrative into StoryMaps.

Be ready to present what you have on Thursday (Feb. 23).

Support Videos on YouTube

Video on Adding Maps to an ESRI StoryMap.
Introduction to StoryMaps

Week 7 (Feb. 23): World Historical Gazetteer

Class Activities
Read:

- [World Historical Gazetteer About page (https://whgazetteer.org/about/)](https://whgazetteer.org/about/)
- [World Historical Gazetteer "Guide" (https://whgazetteer.org/tutorials/guide/)](https://whgazetteer.org/tutorials/guide/)
- [World Historical Gazetteer "lp-tsv" (https://whgazetteer.org/tutorials/create_lptsv/)](https://whgazetteer.org/tutorials/create_lptsv/)

Homework Due Monday (Feb. 27)
Try to reconcile some of your project data with the World Historical Gazetteer. Build a TSV from your gazetteer in Excel and use the following required fields outlined in this tutorial: https://github.com/LinkedPasts/linked-places/blob/master/tsv_0.2.md

Upload screenshots of your data in WHG or error messages in a blog post about the process.

Week 8 (Mar. 2): Bring Your Problems to Class

Class Activities:
Bring any problems you have had with your data models or QGIS or ArcGIS and we will work to resolve then in Class.

Go over choropleth maps
https://earlyamericanelections.org/blog/2019/04/30/qgis-tutorial.html

and Heat Maps
https://www.qgistutorials.com/en/docs/3/creating_heatmaps.html

Homework Due Monday Mar. 6:
None, it will be spring break.

Support Videos on YouTube:

QGIS Joins rejoinder
Basic Choropleth Map in QGIS
Heatmap in QGIS
ArcGIS Online Basics and Choropleth maps

Week 9 (Mar. 9): No Class/Spring Break

Enjoy your spring break. No Homework due either.

Week 10 (Mar. 16): Meet Advisor/Draft due

Meeting with Advisor:
Bring revised abstract, outline, and StoryMap to discuss with your advisor.

Homework Due Mar. 20
Produce a 1,000-word draft for your final project on your WordPress Site

- This is like a regular history essay. It should start with an introduction that outlines some of your research questions and your hypothesis so far. This hypothesis should relate to your mapping/spatial analysis.
- Write some of the historical background for your project as well. How does your project fit into existing scholarship on your topic? Are you the first person to map this aspect of it? What is new and noteworthy in your research? How are you either supporting the claims of other historians or refuting what they have found so far? Is your mapping work filling a gap in the scholarship?
- Try to have at least two paragraphs that will each discuss one potential map series. Include screenshots of your maps so far. Upload PDF in your blog post and email to your advisor.

Week 11 (Mar. 23): Discussion & Geocoding

Class Activities:
Discuss Knowles, "The Contested Nature of Historical GIS" (See Zotero).

OCR and Geocoding

Bring to class a sample of written text related to your project. If it comes from a book, bring a scanned page or take a photo of the page on your phone. Have this file accessible on your computer for class.

Check out Susan Grunewald's tutorial on geocoding with services and Google Maps.
https://github.com/grunewas/OCR-and-Geocoding-Tutorial/blob/master/OCR-and-Geocoding.md

We will go over it in greater detail during class.

Homework due Monday, Mar. 27
Geocode a source related to your project. Blog about the process and how successful the geocoding was.

Week 12 (Mar. 30): Discussion & Tableau

Class Activities
Discuss "Many Ways to Map Election Results" (the Zotero link works better without the paywall) along with Selections from Monmonier & Stephen *How to Lie with Maps* (on Zotero).

We will also go over the use of [Tableau Public](#) for data visualizations that can be embedded in your StoryMap.

Homework Due Monday, April 3:
Map your data (so far) in ArcGIS online using two of the different techniques we discussed – one that you believe accurately depicts your data and one that you feel misrepresents the facts. With the same data, produce a Tableau visualization. Write a brief (500 words) explanation and post text with screenshots (and embed the Tableau Visualization) of the different types of maps to your WordPress site.

A note on embedding Tableau in StoryMaps:
Here is a link to a solution for embedding Tableau into StoryMaps:
https://community.tableau.com/s/question/0D54T00000C5PHVSA3/inserting-tableau-public-link-to-esri-map-story

Basically, tableau does not include the correct ending to the url for it to work. At the end of the https url you need to add the following ending: "**&publish=yes&:showVizHome=no**" **(without quotes). Just add this ending to the url that Tableau produces for you following the instructions from the video below. Then add the url to the StoryMap embed field using URL.**

Support Videos on YouTube on Tableau:

Basics of Tableau Video
Embedding your visualization

Week 13 (Apr. 6): Meet Advisor to discuss Draft

Have a draft of your Story Map complete to discuss with your content advisor. Emphasize the historiography, writing, and presentation during the meeting.

Homework due Monday, April 10:
Post a blog about the suggestions that your content advisor how you are addressing them. Describe the changes you made.

Week 14 (Apr. 13): Project Presentations

Four students will present their projects.

Each presentation should be 10-15 minutes long. Emphasize the argument the project makes, how it impacts the current scholarship on the topic, and then emphasize how the mapping your evidence helped you come to your conclusions.

Week 15 (Apr. 20): Project Presentations

Four students will present their projects.

Each presentation should be 10-15 minutes long. Emphasize the argument the project makes, how it impacts the current scholarship on the topic, and then emphasize how the mapping your evidence helped you come to your conclusions.

Project Due Date: April 27 @ 11:59pm

Turn in a link to your StoryMap via email to me by 11:59 pm on April 27.