Εθνικό και Καποδιστριακό Πανεπιστήμιο Αθηνών
National and Kapodistrian University of Athens

Department of History and Archaeology, School of Philosophy, National and Kapodistrian University of Athens

GIS for archaeologists tutorial

Autumn 2023 and Spring 2024

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Contents

This informal tutorial provides students with knowledge and skills in working with a Geographic Information System (GIS)–more specifically *ArcGIS Online*–and how GIS can be used to analyse issues within archaeology and social sciences more generally. The tutorial introduces basic concepts of landscape analysis and GIS. In the tutorial, participants receive a series of manuals for exercises which they work through to improve their working knowledge of GIS.

Tutorial aims

After completing this course, students should be able to:

- Create and style a basic topographic map
- Independently obtain appropriate map data
- Demonstrate an ability to perform basic analytical functions using *ArcGIS Online*

Schedule

Please note: Times and dates may change subject to the needs of the Philosophy School. If you are unsure, please consult the most recent version of this schedule (always found in the Google Drive: https://tinyurl.com/ypxyc3xp).

For all sessions, the room is: Computer Lab. 8th Floor, 801, Classroom 2. Philosophy School.

Introductory Lecture and Tutorial 1. *Basic map with point distribution*.
November 23rd, 2023. 12.00-14.00

Tutorial 2. *Filtering data by attribute*.
November 30th, 2023. 12.00-14.00

Tutorial 3. *Importing your own data*.
December 7th, 2023. 12.00-14.00

Tutorial 4. *Raster data and their sources*.
December 14th, 2023. 12.00-14.00

Tutorial 5. *Introducing polygons and shapefiles*
January 26th (**Note**: Friday) 2024. 12-14.00.

Tutorial 6. *Problem solving session*
February 1st 2024. 12-14.00.

Tutorial 7. *Problem solving session*
February 8th 2024. 12-14.00.

GIS exercises

The tutorials will generally follow a short presentation by the course instructor before students are invited to begin working through the manual for each tutorial. Most work will be done on ArcGIS Online. It can be accessed through the following webpage:

https://uoa-gr.maps.arcgis.com/home/index.html

The tutorial has no assessment or grading, rather intends to improve GIS-related knowledge in an informal way. The course instructor will be present for the tutorial sessions to help with any queries concerning GIS and the exercises. Though there are several desktops in the Computer Lab, you may wish to bring your own laptop to participate in the tutorial.

Literature

There is no set reading list for the tutorial, other than the manuals provided ahead of each session. Several papers can be recommended for problematising specific element of GIS work, which can be obtained upon request.

Additional information

For those who get errors in exporting/printing the web map, I think I may have a solution:

1. **Save** your map.
2. On the left panel go to **Content**
3. Find the map you were just working on and click on the hyperlink
4. In the top right corner, select **Settings**
5. Scroll down to **Layer settings** and select **Update Layers to HTTPS**
6. **Confirm** to update layers
7. Click **Overview** in top right corner
8. **Open in Map Viewer**

It appears that the problem may be that the printing service is confusing some layers as HTTP rather than HTTPS and believes the link to be insecure.

Signing up for an ESRI Public Account

1. Go to https://www.arcgis.com/index.html

2. Select Sign In
3. Select Create an account
4. Create an ArcGIS Public Account
5. Fill out your details and click Next
6. Click the link sent to your email address.
7. Select a Username, Password and Security Question/Answer
8. Now you can access the Map creation and Living Atlas and ArcGIS online content. Some files and features may not be the same as when having full access, but you should be able to undertake the exercises and export maps.

Temporary workaround for printing

I have identified the general error with printing maps as connected the CSV files that we use for representing spatial data. This is an edit to Method 2 from Tutorial 3. I have identified a temporary workaround:

1. Generate your data in CSV as described in Tutorial 3.
2. Head to https://mygeodata.cloud/converter/. This site generates a python script that converts your CSV file into other formats.
3. Upload your CSV file with your points and select a conversion to the. geojson format.
4. You can then download the file in the form of a zip file.
5. Extract the ZIP file and add the geojson file into the ArcGIS Online web app as we have done with the CSV files previously.
6. The way they are formatted is slightly different to CSV, but all the essential information is contained there.
7. For example, for the Hellenistic_Saronic file, you can follow the general outline for Tutorial 2 to style the points, however, it is not automatically made into different sizes. To achieve this: under Styles select the field as before (Field – Site Size). Now under Types (unique symbols), you should see three different classes (1, 2, 3). For each, click the circle symbol to change its style. Make sure that you untick Adjust size automatically. Now you can change the sizes of the different classes.
8. Print as before. I have tried different examples, and each has worked, but please do let me know if this works for you. If so, going forward we will use this method rather than CSV.