

q1

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outline

qgis basics

more data action

general references

- ◇ <http://maps.cga.harvard.edu/qgis/>
useful !
- ◇ http://www.youtube.com/results?search_query=qgis
not sure, any of these useful in particular? email listserv
- ◇ http://www.qgistutorials.com/en/docs/teach_qgis.html
- ◇ Good howto, references
 - <http://hub.qgis.org/projects/quantum-gis/wiki/>
 - http://hub.qgis.org/projects/quantum-gis/wiki/How_do_I_do_that_in_QGIS
- ◇ other (rather lengthy and dry):
 - http://docs.qgis.org/2.2/en/docs/gentle_gis_introduction
 - http://docs.qgis.org/2.2/en/docs/training_manual

to get started

- <http://maps.cga.harvard.edu/qgis/wkshop/index.php>
- <http://maps.cga.harvard.edu/qgis/wkshop/ui.php>
- <http://maps.cga.harvard.edu/qgis/wkshop/toolbars.php>
- <http://maps.cga.harvard.edu/qgis/wkshop/panzoom.php>
- <http://maps.cga.harvard.edu/qgis/wkshop/select.php>

the tip of the semester

- ◇ get yourself a hi-res screen
 - (if you don't have one yet)
- ◇ it *immensely* helps working with data, and hence, with gis
- ◇ I know, you are a student and you may not be wealthy,
 - but it's just about \$100 for 1920x1080 eg <http://www.newegg.com/Product/Product.aspx?Item=N82E16824236117>
- ◇ i'm using 2560x1440 for about \$300 <http://www.newegg.com/Product/Product.aspx?Item=N82E16824236453>
 - what matters is # of pixels not size of the screen !
- ◇ and it will save you lot of time and pay for itself in few weeks

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gui

- ◇ pretty standard gui
- ◇ first thing is to add data...
- ◇ say US states; where do i get it?
- ◇ google "US states shapefile" and we get
- ◇ `https://www.census.gov/geo/maps-data/data/tiger-cart-boundary.html`
- ◇ click 'State,' and get
- ◇ `https://www.census.gov/geo/maps-data/data/cbf/cbf_state.html`
- ◇ and download say 'cb_2014_us_state_20m.zip' (reliable)
 - important: always ask yourself how reliable is the source
- ◇ in general trust govt, major companies, universities, etc

adding data

- ◇ click first icon on the left toolbar “line with nodes” for vector data
- ◇ “checkboard” is for raster/pictures (seldom used)
- ◇ and we got US in the middle: the map
 - grab it and move around with “hand” pointer
- ◇ and a layer on the left—you can uncheck it
 - and right click to pop up more information

zooming, identifying

- ◇ can zoom in and out
 - either click the map with appropriate tool
 - better yet, draw a rectangle to achieve appropriate zoom
- ◇ once zoomed in, let's identify features
 - select tool “arrow with ‘i’” - ‘i’ for info/identify
 - click on some polygon, say TX and it'll pop up information
- ◇ useful to right click on layer and “zoom to layer”

underlying data

- ◇ there is always a table (database) underlying a map
- ◇ right-click on the layer, and open “open attribute table”
- ◇ now, let's make a selection
 - and you can highlight some rows in the table
 - or do it in the map: “arrow with rectangle”
 - either click or draw a rectangle
 - to deselect use “arrow with 'no' sign”

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loading data

◇ and let's get some more data and load it into qgis

`http://people.hmdc.harvard.edu/~akozaryn/myweb/bounds_
nj_shp.zip`

play around

- ◇ add more layers, move them up and down
- ◇ turn on the layers and off (check tick)
- ◇ right click and see the data (table)
- remember i was saying there is always data under the map?

your first thematic map

- ◇ thematic maps are the key thing in this class: thematic.pdf
- ◇ nj_counties-Properties-Style and from drop-down:
“Graduated”
- ◇ Column: “POP2010”
- ◇ Color ramp: can just leave Blues
- ◇ and hit “Classify” button
- ◇ many ways to do the classification: more soon
 - if you’re curious—just poke around with classifications
 - easy to experiment and figure things out there
- ◇ and hit “OK” to see the map—viola!

make your first map: print composer

- ◇ project–new print composer
- ◇ NJ is tall: on the right “Composition”: “portrait”
- ◇ hit blank button “add new map” on left and draw a rectangle
- ◇ hit button with arrows “move item content” to move it
- ◇ on the right “item properties”: “Scale”: adjust it
- ◇ add legend, maybe a label
 - always need to have a “self-explanatory” description
- ◇ export: pdf icon at the top in the middle
 - always have the metadata—either in a separate file or in map
- ◇ elaboration http://www.qgistutorials.com/en/docs/making_a_map.html and