

# online mapping with google maps

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## outline

google.com/mymaps (almost like qgis!)

mapbox

other online mapping options

more about mmqgis

if time: final\_project.pdf



## examples

- <http://www.njspotlight.com/stories/12/12/20/crime-in-new-jersey/>
- <http://www.liveebolamap.com/>
- can use for collaboration—just enable editing for anyone!
- can also enable editing for a select group of folks
- say those with special link
- great tool for collaborative mapping!

## why online maps?

- very easy to share;
- higher quality than printout or even pdf
- can zoom in/out, pop up features etc
- especially good for low-level (hi-res) mapping
- because you have a neat basemap with all the details...
- can click to pop out other variables
- (like identify feature in qgis but less clunky)

## why online maps?

- even can have your own business/service/app/etc
- just display something interesting on the top of a google map
- e.g. <http://www.trulia.com>
- sounds impossible?
- see maps from previous years shared with me on goog  
mymaps

## before we get started

- need to have google account
- why google?
- actually, i've been playing with online mapping a lot
- found google maps much better/easier than anything else
- but you are free to use any other service, say bing
- in fact, you do not have to use online mapping at all
  - neither for next ps nor for final project
  - (but you need to compensate with something else)

## basic things in regular google maps

- (may not work sometimes: guess browser or OS)
- <https://maps.google.com/maps>
- search for 'rutgers camden'
- but can do polygons, too: '08102', 'university city, pa', etc
- can do lat/long: '38.8977 N, 77.0366 W' or '38.8977 ,  
-77.0366'
- [https://s3.us-east-2.amazonaws.com/journeynorth.org/  
images/graphics/mclass/Lat\\_Long.gif](https://s3.us-east-2.amazonaws.com/journeynorth.org/images/graphics/mclass/Lat_Long.gif)
- we'll be loading kml, which is just a bunch of coordinates



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## fire it up

- <http://google.com/mymaps>
- interface almost like qgis
  - some rudimentary tools at the top
  - layers on the left
  - even data table is accessible
- in the future, maybe all gis will be done online like this
  - for now, still need software like qgis

## not only display of imported kml; can create kml!

- as any google maps: markers, driving, cycling, etc
- also can draw any lines, polygons
- can add attributes
- can export as kml
- let's do it!

<http://google.com/mymaps> **will generate your own data**

- this is actually made for generating your own gis data
- zoom in on Camden NJ—can just search it search box
- select placemark from the top and put onto R and mark 'R'
- and put placemark on patco station and call 'patco'
- from line segment select 'Add walking route'
- and make a line to patco station (double click to end it), name it 'path' (and pop up distance)
- from left menu let's 'Add layer' (cant have shapes and routes on one)
- from line segment menu select 'Add line or shape'
- put a polygon on parking lot (just draw line around it)
- call it 'park'; click it to pop up acres; save it as kml

# kml

- just another vector format like shp
  - and just one file as opposed to shp
  - can just use qgis to turn shp into kml
  - but kml is a popular format and can often get data in kml
- eg `http://www.census.gov/geo/maps-data/data/tiger-kml.html`

## loading kml from goog maps to qgis

- click main menu (three vertical lines at the top-left):
  - 'Export to KML/KMZ' and check KML!! (qgis may dislike KMZ)
- load it to qgis as any vector layer
  - make sure you click 'Select All' !
- and viola! we have it in qgis
  - add openlayers basemap to put it in context

## can get creative

- mark points where you think it is unsafe
- mark your travel destinations (in addition to that map on your wall with pins)
- mark your jogging route (or use one of those apps to record it and then download to qgis)
- get creative!

## timeline

- as you imagine, google records your location
- the good thing is that you can download it :)
- <http://google.com/maps>
- click menu (3 horizontal lines on the left)
- click 'Your timeline'
- can browse it by date
- at the bottom right click cog icon and
- 'Download a copy of all your data'
- select kml instead of json



## how about just displaying kml from qgis?

- can do that, too; though little less handy than in qgis
- can just export kml from qgis
- in fact can put the thematic map straight from qgis onto google maps!
- but first, simplify polygons

## simplify polygons

- make it smaller so that it loads faster
- load our fav nj counties
- `https://docs.google.com/uc?id=1xJDhcRCkgv7k4tNCa720og5bohV6dTB2&export=download`
- Vector-Geometry Tools-Simplify Geometries
- and simplify polygons with tolerance of 1,000
- if you do something like 25k, you'll mutate nj too much!)
- really, as a rule, simplify all data before online display

## make thematic map and export to kml

- say pop2010 3 classes (tertiles)
- can also make it transparent if you want to
- MMQGIS-Import/Export-Google Maps KML
- (just keep the defaults and play with them at home)

## uploading to google maps

- <http://google.com/mymaps>
- from left menu: 'Add layer' and then Import

## make it pretty!

- bottom of left menu: adjust basemap
  - i like similar non-contrasting colors
  - either lightish or darkish
- can also play with “Individual styles”

# ideas

- these ramps colors are quite lame
- may actually want to click and edit and pick some opposing colors
- like green and red
- especially if there are few classes, like 3
- then do say red, yellow, green

## other things

- Under 'Individual styles' can also 'Set labels':  
'COUNTY\_LAB'
- make it light so it doesn't obscure colors!
- finally, at top-left click 'share,' make it public and send me a link

and can geocode!

- load philadelphia apartments as excel



## add colleges

- load our favorite colleges into qgis
  - [https://sites.google.com/site/adamokuliczkozaryn/gis\\_int/hsip\\_colleges.zip?attredirects=0&d=1](https://sites.google.com/site/adamokuliczkozaryn/gis_int/hsip_colleges.zip?attredirects=0&d=1)
- MMQGIS-Import/Export-Google Maps KML Export
- and load into google maps
- can change style of placemarkers to something fancy
- first change 'Individual styles' to 'Uniform style'
- and on the right click a 'bucket icon' and 'More icons'

## that's it...

- please play with google maps
- it should be pretty straightforward and user-friendly

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## mapbox and open map

- mapbox and open map seems like a good alternative to google
- <https://www.mapbox.com/about/maps/>

looks promising! give it a try

- [https://blog.mapbox.com/  
introducing-data-explorer-a-new-way-to-quickly](https://blog.mapbox.com/introducing-data-explorer-a-new-way-to-quickly)

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## many options

- there are dozens of ways to make maps online
- even per google there are many ways to do it
- feel free to experiment and play around
- i am curious about your impressions
- especially if you find out something great, do let us know!

## fusion tables

- can use Google's fusion tables
  - `https://support.google.com/fusiontables/answer/2571232?hl=en`
  - more powerful in a sense that allows more data, obs, vars
  - and can customize it using some java
- but less clear, i think
  - and doesn't seem to work the way you want it to work
- but i am curious about your impressions



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# animation

- <http://michaelminn.com/linux/mmqgis/>
- [https://medium.com/@tjukanov/  
geogiffery-in-a-nutshell-introduction-to-qgis-time-manag](https://medium.com/@tjukanov/geogiffery-in-a-nutshell-introduction-to-qgis-time-manag)

## combine layers

- mmqgis-combine-merge layers (need to be same type: polygon, line, point)

## mmqgis more

- there is much more !
- just explore menu

## combining layers

- there was a question about how to combine layers
- mmqgis-combine-merge layers
- just make sure all are same type (polygon, line, point)
- more info on combining layers: <http://gis.stackexchange.com/questions/25061/how-to-merge-multiple-layers-to-one-layer-using-qgis>
- <http://www.statsilk.com/maps/merge-multiple-map-layers-single-shapefile-using-quantum-gis>
- <http://www.igismap.com/merge-two-shapefile-qgis/>

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